

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

(Case No. 05-476-C)

In re the Application of:)	
)	
Choon Geun Cho)	
)	
International Application No: PCT/KR2004/02466)	Examiner: To be assigned
U.S. Application No.: 10/567,529)	
)	Group Art Unit: 3662
Int'l Filing Date: September 24, 2004)	
U.S. Filing Date: February 7, 2006)	Confirmation Number: 9262
)	
For: Apparatus and Method for Tracking the)	
Position/Object Using a Mobile)	
Communication Network)	

Mail Stop PCT
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

TRANSMITTAL LETTER

Sir/Madam:


In regard to the above identified application.

1. We are transmitting herewith the attached:
 - a) Copy of Decision on Petition Under 37 C.F.R. § 1.47(b), mailed May 10, 2007;
 - b) Renewed Petition Under 37 C.F.R. § 1.47(b) By Person Having Proprietary Interest to File Application On Behalf Of Inventor Who We Have Been Unable to Locate;
 - c) Statement Establishing Proprietary Interest By Person Signing on Behalf of Nonsigning Inventor and Statement Under 37 C.F.R. § 3.73(b), including exhibits;
 - d) Declaration In Support Of Petition Under 37 C.F.R. § 1.47(B) By Person Having Proprietary Interest To File Application On Behalf Of Inventor, signed by Jiwon Lim;
 - e) Memorandum of Law in Support of Petition Under 37 C.F.R. § 1.47(B) By Person Having Proprietary Interest to File Application on Behalf of Inventor;
 - f) Declaration in Support of Petition Under 37 C.F.R. § 1.47(B) By Person Having Proprietary Interest to File Application on Behalf of Inventor, signed by Joo-Young Kim, including exhibits; and
 - g) Return Receipt Postcard.
2. With respect to fees:
 - a) Please charge any underpayment or credit any overpayment to our Deposit Account No. 13-2490.

3. CERTIFICATE OF MAILING UNDER 37 CFR § 1.10: The undersigned hereby certifies that this Transmittal Letter and the papers, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as "Express Mail Post Office to Addressee," addressed to: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 28, 2007 under Express Mail Certificate No. EV839329749US.

Date: June 28, 2007

Respectfully submitted,



Robert J. Irvine III
Registration No. 41,865



10 MAY 2007

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

DOCKETED

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO IL 60606

Renewal MAY 15 2007
Petition 7-10-07
DUE DATE
BY: [Signature]

In re Application of
CHO
Application No.: 10/567,529
PCT No.: PCT/KR2004/002466
Int. Filing Date: 24 September 2004
Priority Date: 26 September 2003
Attorney Docket No.: 05-476-C
For: APPARATUS AND METHOD FOR THE
POSITION OF A PERSON/OBJECT USING A
MOBILE COMMUNICATION NETWORK

: DECISION ON
:
:
: PETITION UNDER
:
:
: 37 CFR § 1.47(b)
:
:
:
:
:
:
:

This is a decision on applicant's petition under 37 CFR 1.47(b) filed in the United States Patent and Trademark Office (USPTO) on 19 March 2007.

BACKGROUND

On 24 September 2004, applicant filed international application PCT/KR2004/002466, which designated the US and claimed a priority date of 26 September 2003. A copy of the international application was communicated to the United States Patent and Trademark Office (USPTO) from the International Bureau on 07 April 2005. The thirty-month period for paying the basic national fee in the United States expired at midnight on 27 March 2006 (26 March 2006 being a Sunday).

On 07 February 2006, applicant filed a submission for entry into the national stage in the United States which was accompanied by, *inter alia*, the U.S. Basic National Fee and the surcharge under 37 CFR 1.492(h).

On 14 September 2006, the United States Designated/Elected Office (DO/EO/US) mailed a NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 (Form PCT/DO/EO/905) indicating, *inter alia*, that an oath or declaration of the inventor in compliance with 37 CFR 1.497(a)-(b) was required. The NOTIFICATION set a two-month extendable period for reply.

On 19 March 2007, applicant submitted the instant petition under 37 CFR 1.47(b). The petition was accompanied by, *inter alia*, a petition/fee for a four month extension of time, a

declaration of facts by Joo-Young Kim, a memorandum of law by Joo-Young Kim, and a declaration of facts by Jiwon Lim.

DISCUSSION

A petition under 37 CFR 1.47(b) must be accompanied by: (1) the fee under 37 CFR 1.17(h), (2) factual proof that the inventor refuses to execute the application or cannot be reached after diligent effort, (3) a statement of the last known address of the inventor, (4) an oath or declaration by the 37 CFR 1.47(b) applicant on behalf of and as agent for the non-signing inventor, (5) proof that the 37 CFR 1.47(b) applicant has sufficient proprietary interest in the application, and (6) a showing that such action is necessary to preserve the rights of the parties or to prevent irreparable damage.

Items (1), (3), (4), and (6) have been met.

Item (2) has not been met. The declaration of facts of Jiwon Lim and the accompanying exhibits have been considered. It appears that the internet searches for Mr. Cho's e-mail address and telephone number may have been too specific. For example, in Exhibit 5, the name "Cho Choon Geun" seems to have been used as a search term along with a range for the "Residence ID". It is not clear if a "Residence ID" is required. If it is, perhaps the range can be broadened. Additionally, a broader search using "Cho Choon" as the name would seem to be reasonable. Similar concerns are present in Exhibit 5. Again, it is not clear that a partial address is required. If it is required, perhaps it should be broadened. Also, it appears that a broader search can reasonably be used for Mr. Cho's name.

Item (5) has not been met. The declaration of facts Joo-Young Kim and the memorandum of law by Joo-Young Kim have been considered. The invention disclosure form mentioned in the memorandum appears to be the "Employee's Declaration of Invention" included in Exhibit 3. It is unclear why three additional inventors (You In Ho, Kim Dae Joong, and Yang Ho Yong) are listed in this disclosure form but only one inventor is listed in the international application. The "Assignment" in Exhibit 3 has also been considered. However, the only identifier tying the signed "Employee's Declaration of Invention" and the "Assignment" are the names. Again, four names are given while only one is listed in the international application. The memorandum of law also states that "[a]ll facts in support of the argument and conclusion are set forth in the Declaration of Andrew Choung under M.P.E.P. 409.03(f)." However, a declaration of Andrew Choung does not appear in the application file. Also, the memorandum identifies the application by referring to Schedule A, columns 3-6 and 8. However, these identifiers identify 28 different applications. It appears that a row of Schedule A would need to be identified.

CONCLUSION

For the above reasons, applicants' petition under 37 CFR 1.47(b) is **DISMISSED**, without prejudice.

If reconsideration on the merits of this petition is desired, a proper response must be filed within TWO (2) MONTHS from the mail date of this decision. Failure to timely file the proper response will result in abandonment of this application. Any reconsideration request should include a cover letter entitled "Renewed Petition Under 37 CFR 1.47(b)". No additional petition fee is required. Extensions of time may be obtained under 37 CFR 1.136(a).

Please direct further correspondence with respect to this matter to Mail Stop PCT, Commissioner for Patents, Office of PCT Legal Administration, P.O. Box 1450, Alexandria, Virginia 22313-1450, with the contents of the letter marked to the attention of the Office of PCT Legal Administration.



Daniel Stemmer
Legal Examiner
PCT Legal Affairs
Office of Patent Cooperation Treaty
Legal Administration
Telephone: (571) 272-3301
Facsimile: (571) 273-0459

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

(Case No. 05-476-C)

In re the Application of:)	
)	
Choon Geun Cho)	
)	
International Application No: PCT/KR2004/02466)	Examiner: To be assigned
U.S. Application No.: 10/567,529)	
)	Group Art Unit: 3662
Int'l Filing Date: September 24, 2004)	
U.S. Filing Date: February 7, 2006)	Confirmation Number: 9262
)	
For: Apparatus and Method for Tracking the)	
Position/Object Using a Mobile)	
Communication Network)	

Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**RENEWED PETITION UNDER 37 C.F.R. § 1.47(b) BY PERSON HAVING
PROPRIETARY INTEREST TO FILE APPLICATION ON BEHALF
OF INVENTOR WHO WE HAVE BEEN UNABLE TO LOCATE**

Dear Sir:

Reconsideration of the May 10, 2007 Decision on Petition Under 37 C.F.R. §1.47(b) by a Person Having Proprietary Interest to File an Application on Behalf of a Non-Signing Inventor, filed March 19, 2007, is respectfully requested. Applicants respectfully request the U.S. Patent Office to allow UTStarcom, Inc, to make the Application on behalf of inventor Choon Geun CHO who we have been unable to locate.

In support of this Renewed Petition, Applicants submit:

- (i) Copy of previously submitted Statement Establishing Proprietary Interest By Person Signing on Behalf of Nonsigning Inventor and Statement Under 37 C.F.R. §3.73(b);
- (ii) Declaration in Support of Petition Under 37 CFR §1.47(b) By Person Having Proprietary Interest to File Application on Behalf of Inventor, signed by Joo-Young Kim;
- (iii) Memorandum of Law in Support of Petition Under 37 §CFR 1.47(b) By Person Having Proprietary Interest to File Application on Behalf of Inventor, including exhibits, signed by Joo-Young Kim; and
- (iv) Updated Declaration in Support of Petition Under 37 CFR §1.47(b) By Person Having Proprietary Interest to File Application on Behalf of a Nonsigning Inventor, including exhibits, signed by Jiwon Lim.

I. Background

Applicant's previous petition was dismissed without prejudice for two reasons: 1) the factual proof that the inventor refuses to execute the application or cannot be reached after diligent effort was allegedly insufficient; and 2) Applicant's proof that it has proprietary interest in the instant application was allegedly insufficient.

II. Discussion

UTStarcom, Inc. respectfully submits that it has been unable to locate inventor Choon Geun CHO. Every attempt to obtain Choon Geun CHO's signature has been unsuccessful. As evidenced by the accompanying updated declaration of Jiwon Lim, continuous and diligent efforts have been made to obtain Choon Geun CHO's signature on declarations for this case. Furthermore, as demonstrated by accompanying Memorandum of Law and Declaration of Joo-Young Kim, UTStarcom is the owner of the invention described in the instant application. Based on such diligent efforts to obtain Choon Geun CHO's signature on the declaration for this case and based on the facts and law outlined in the Memorandum of Law and Declaration of Joo-Young Kim, Applicants believe that the requirements of 37 C.F.R. § 1.47(b) and MPEP § 409.03 have been met.

A. Applicants Have Made A Diligent And Comprehensive Search For The Inventor

In the Decision on Petition Under 37 CFR §1.47(b), the Office suggested that the internet searches performed to locate Mr. CHO were too specific. As evidenced in the accompanying declaration of Ms. Jiwon Lim, Korean webmail services require a user to enter his or her full name and full residence identification number in order to register for webmail. This information is used by webmail services to confirm the identity of the person registering for webmail service. Therefore, searching by residence ID is the most effective way to locate a person's webmail address. In addition, broadening the searches to use partial names would not be effective for the same reason; a person must use his or her full name to register for webmail service in Korea. Ms. Lim has performed numerous searches for inventors' webmail addresses, and has concluded that this is the most effective and accurate way to search, and that a broader search would be ineffectual. Furthermore, the searches performed, including queries of KOIS (the Korean equivalent of "411" service) have provided no information regarding the location of Mr. CHO. Applicants believe that these searches are comprehensive, and that all efforts to locate the inventor, Mr. CHO, have been exhausted.

B. Applicants Have Established Proprietary Interest In The Instant Application

The Office found the evidence supporting Applicant's claim of proprietary interest in the instant application to be insufficient. The Office cited the following problems with respect to proprietary interest: 1) it is unclear why additional inventors are listed in the "Employee's Declaration of Invention", while only one inventor is listed in the international application; 2) The "Assignment" and "Employee's Declaration of Invention" are only connected by the listed inventors' names; 3) the Memorandum of Law cites the "Declaration of Andrew Choung," but Mr. Choung's declaration was not submitted, and 4) Applicants did not specify which row of Schedule A identifies the instant application.

With respect to the discrepancy between the Memorandum of Law and Declaration, Applicants regret the typographical error, and enclose a corrected Memorandum of Law which correctly identifies the supporting Declaration of Joo-Young Kim (also enclosed), rather

than Declaration of Andrew Choung. Furthermore, Applicants direct the Office to Row 14 of Schedule A, a copy of which is enclosed, which identifies the instant application.

With respect to the alleged insufficiency of proof that Applicants have proprietary interest in the instant application, the Applicants respectfully submit that the previously submitted documents together with the enclosed documents prove that Applicants have sufficient proprietary interest to file this application without the signature of the inventor. MPEP §409.03(f) states that, when all inventors have refused to cooperate, or cannot be located, the applicant must prove proprietary interest by showing that “A) the invention has been assigned to the applicant; B) the inventor has agreed in writing to assign the invention to the applicant; **OR** C) the applicant otherwise has sufficient proprietary interest in the subject matter to justify the filing of the application.”

i. Inventorship must be assumed to have been correctly determined

Applicants submit that the discrepancy between inventors listed on the “Employee’s Declaration of Invention”, included in Exhibit 3, and the listed inventor of the instant application is not a sufficient ground for dismissal of this petition. As the Office is surely aware, inventorship is determined based on the claims of the application. Thus, while several people may have contributed to the invention described in the Employee’s Declaration of Invention, it is possible for only one inventor’s contribution to be claimed in a resulting patent application. The instant application was prepared first as a Korean national application, and inventorship, based on the claims of that application, was determined at that time. It must be assumed that inventorship was correctly based on the claims of that application, which are echoed in the instant application.

ii. The inventor signed the “Employee’s Declaration of Invention”

Applicants submit that, regardless of the scope of inventorship indicated by the “Employee’s Declaration of Invention,” the Declaration of Invention, signed by the inventor of the instant application, clearly indicates that the inventor was required to assign, and did in fact assign, the rights to the invention to Hyundai Syscomm, which subsequently assigned its rights to the invention to UTStarcom (see previously submitted Assignment documents).

iii. Under Korean law, UTStarcom is the *de facto* owner of the Application

Even if the inventor's assignment of the invention, which is explicitly required by the "Employee's Declaration of Invention" is not sufficient to establish UTStarcom's proprietary interest in the instant application, under Korean law, UTStarcom is the *de facto* owner of the application. While the Applicants do not believe that the assignment documentation previously presented is insufficient, those documents are not necessary to prove that the Applicants have sufficient proprietary interest to file this application without the signature of the inventor.

The accompanying Memorandum of Law and Declaration signed by Joo-Young Kim address the issue of ownership of the instant application. Specifically, under Korean law an invention and the resulting patent application are owned by an employee's company unless and until the employee successfully challenges this ownership, which did not occur in the instant case. The Korean Patent Act provides that a patent application of an employee may be filed directly by the employee's company, without an explicit assignment from the employee to the employee's company. Even if the Assignment and Employee's Declaration of Invention are insufficient to establish proprietary interest in the instant application, UTStarcom should be considered the owner of the application based on the applicable Korean law. Therefore, even if the Applicants have not established proprietary interest, pursuant to MPEP §409.03(f)(A) or (B), Applicants respectfully submit that proof under §409.03(f)(C) has been sufficiently established.

III. Conclusion

Filing of the application without Oath or Declaration executed by Choon Geun CHO is necessary to preserve the rights of Applicant UTStarcom, Inc. Applicant UTStarcom, Inc. will suffer irreparable harm if not allowed to apply for a patent for the above-referenced Application because the United States Patent and Trademark Office will hold the present Application abandoned if it is without an executed Oath or Declaration. The Applicants respectfully submit that items (2) and (5) of 37 CFR §1.47(b) have been met, and request that this Petition be granted.

No further fee is believed due at this time. Please charge any underpayment, or credit any overpayment, to Deposit Account 13-2490.

Respectfully submitted,

Date: 6/27/02

A handwritten signature in black ink, appearing to read "Robert J. Irvine, III", written over a horizontal line.

Robert J. Irvine, III

Reg. No. 41,865

McDonnell Boehnen Hulbert & Berghoff LLP

300 South Wacker Drive, Ste. 3100

Chicago, IL 60606

Tel: 312 913 – 0001

Fax: 312 913 – 0002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

(Case No. 05-476-C)

In re the Application of:)	
)	
Choon Geun Cho)	
)	
International Application No: PCT/KR2004/02466)	Examiner: TBA
U.S. Application No.: 10/567,529)	
)	Group Art Unit: 3662
Int'l Filing Date: September 24, 2004)	
U.S. Filing Date: February 7, 2006)	Confirmation Number: 9262
)	
For: Apparatus and Method for Tracking the)	
Position/Object Using a Mobile)	
Communication Network)	

Mail Stop PCT
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

**STATEMENT ESTABLISHING PROPRIETARY INTEREST BY
 PERSON SIGNING ON BEHALF OF NONSIGNING INVENTOR
 AND STATEMENT UNDER 37 C.F.R. § 3.73(B)**

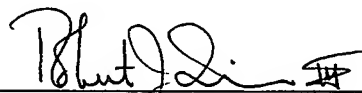
UTStarcom, Inc. has a sole proprietary interest in the present application. The invention, entitled "APPARATUS AND METHOD FOR TRACKING THE POSITION/OBJECT USING A MOBILE COMMUNICATION NETWORK," was originally assigned by the inventor to Hyundai Syscomm on November 30, 2002, as part of Hyundai Syscomm's employee invention compensation policy, and was filed as Korean National Application Number 2003-0066875 (Exhibit A). On April 27, 2004, UTStarcom, Inc., through its wholly owned subsidiary in Korea, UTStarcom Korea Limited, acquired Hyundai Syscomm's Intellectual Property Portfolio, including the rights to the above-referenced application, corresponding to Korean National Application Number 2003-0066875 (Exhibit B, page 46 of 46, entry number 1309). I establish this

proprietary interest by attaching a copy of the assignment of this invention by the nonsigning inventor to Hyundai Syscomm, Inc. as recorded with the U.S. Patent and Trademark Office (Exhibit A), and a copy of the assignment of this invention by Hyundai Syscomm, Inc. to UTStarcom Korea Limited as recorded with the U.S. Patent and Trademark Office (Exhibit B). As such, UTStarcom, Inc. is presently the assignee and owner of the rights to the above-referenced application.

This STATEMENT ESTABLISHING PROPRIETARY INTEREST BY PERSON SIGNING ON BEHALF OF NONSIGNING INVENTOR is made by Robert J. Irvine, III, a person authorized to act on behalf assignee UTStarcom, Inc.

Respectfully submitted,

Date: March 14, 2007



Robert J. Irvine, III

Registration No. 41,865

McDonnell Boehnen Hulbert & Berghoff LLP

300 South Wacker Drive, Ste. 3100

Chicago, IL 60606

Tel: 312 913 0001

Fax: 312 913 0002

EXHIBIT A

MCDONNELL BOEHNEN HULBERT BERGHOFF LLP COMPANY:300 300 SOUTH WACKER DRIVE

**UNITED STATES PATENT AND TRADEMARK OFFICE**

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

MARCH 14, 2007

PTAS

500238908A

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 SOUTH WACKER DRIVE
ROBERT J. IRVINE III
CHICAGO, IL 60606

500238908A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT SERVICES BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 03/14/2007

REEL/FRAME: 019008/0354
NUMBER OF PAGES: 20

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).
DOCKET NUMBER: 05-476-C

ASSIGNOR:

CHO, CHOON GEUN

DOC DATE: 11/30/2002

ASSIGNEE:

HYUNDAI SYSCOMM, INC.
SAN 136-1, AMI-RI, BUBAL-EUB,
ICHEON-SI
GYEONGGI-DO, DEM REP OF KOREA

467-701

SERIAL NUMBER: 10567529

FILING DATE:

PATENT NUMBER:

ISSUE DATE:

TITLE: APPARATUS AND METHOD FOR TRACKING THE POSITION OF A PERSON/OBJECT
USING A MOBILE COMMUNICATION NETWORK

USPTO

3/15/2007 10:31:24 PM

PAGE

3/005

Fax Server

:MCDONNELL BOEHNEN HULBERT

BERGHOFF LLP

COMPANY:30C

JUTH WACKER DRIVE

019008/0354 PAGE 2

KIMBERLY WHITE, EXAMINER
ASSIGNMENT SERVICES BRANCH
PUBLIC RECORDS DIVISION

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

03/14/2007
500238908

SUBMISSION TYPE:

NEW ASSIGNMENT

NATURE OF CONVEYANCE:

ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Choon Geun Cho	11/30/2002

RECEIVING PARTY DATA

Name:	Hyundai Syscomm, Inc.
Street Address:	San 136-1, Ami-Ri, Bubal-eub, Icheon-si
City:	Gyeonggi-do
State/Country:	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF
Postal Code:	467-701

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	10567529

CORRESPONDENCE DATA

Fax Number: (312)913-0002

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 3129130001

Email: docketing@mbhb.com

Correspondent Name: McDonnell Boehnen Hulbert & Berghoff LLP

Address Line 1: 300 South Wacker Drive

Address Line 2: Robert J. Irvine III

Address Line 4: Chicago, ILLINOIS 60606

ATTORNEY DOCKET NUMBER:

05-476-C

NAME OF SUBMITTER:

Robert J. Irvine III

Total Attachments: 18

source=_0314102835_001#page1.tif

source=_0314102835_001#page2.tif

source=_0314102835_001#page3.tif

CH \$40.00 10567529

:MCDONNELL BOEHNEN HULBERT

BERGHOFF LLP

COMPANY:300

JUTH WACKER DRIVE

source=_0314102835_001#page4.tif
source=_0314102835_001#page5.tif
source=_0314102835_001#page6.tif
source=_0314102835_001#page7.tif
source=_0314102835_001#page8.tif
source=_0314102835_001#page9.tif
source=_0314102835_001#page10.tif
source=_0314102835_001#page11.tif
source=_0314102835_001#page12.tif
source=_0314102835_001#page13.tif
source=_0314102835_001#page14.tif
source=_0314102835_001#page15.tif
source=_0314102835_001#page16.tif
source=_0314102835_001#page17.tif
source=_0314102835_001#page18.tif

직무 발명 신고서

신고일: 200 년 월 일

발 명 포 의 실	결 재	업무코드		승인권자	현 장 관 리 자	검토	법 제 특 허 부	결 재	업무코드		승인권자
		주발명자	검토	필장					기안	검토	승인
	직위/성명	김민준	/	김민준	/	직위/성명	김민준	/	김민준	/	
	일 지	/	/	/	관리번호		일 지				
	보존번호	0, 1, 2, 3, 5, 10, 영구				보존번호	1, 3, 5, 10, 영구	보안등급	1, 2, 3 대외비		

사내 직무발명보상기준에 의거하여 출원/등록을 의뢰하며, 국내/외 등록권리를 양도합니다.

발명자
기재사항

발명의 명칭	대인/대물의 위치추적에 적합한 저전력형 소형 CDMA 무선송수신 장치		
발명의 개요	본 발명은 대인/대물의 위치추적에 있어 무선송수신 장치를 조작할 능력이 없거나 휴대하기가 힘든 경우에 적합한 부호분할 다중접속(CDMA) 기술을 이용하는 무선송수신 장치에 관한 것으로, 기존 CDMA 이동통신망에 접속할 수 있는 최소의 기능, 위성위치확인 시스템(GPS) 칩 또는 위치추출 알고리즘을 이용한 현재의 위치정보 추출 기능, 추출된 위치정보, 개인식별 정보 및 휴대자의 긴급상황을 알릴 수 있는 무선송수신 기능 및 무선송수신 장치를 휴대한 대인/대물의 주위 사람들에게 현재 처한 상황을 알려줄 수 있는 외부알림 기능 등을 갖는 무선송수신 장치에 관한 것이다.		
관련PROJECT명			
실시상황	<input type="checkbox"/> 착상 <input type="checkbox"/> 설계완료 <input type="checkbox"/> 시험(중, 완료) <input type="checkbox"/> 사업화(준비중, 실시중)		
본발명의 발표상황	<input type="checkbox"/> 미발표 <input type="checkbox"/> 발표예정 <input type="checkbox"/> 既발표 ※ 既발표 또는 발표 예정인 경우 발표(예정)일과 관련논문등 기입 요망 [발표(예정)일: 2000년 월 일, 관련논문:]		
선행특허자료	국 내		
	외 국		
출원완급	<input type="checkbox"/> 보 통	지급출원	
	<input type="checkbox"/> 지 급 → (일 이내)	이 유	
외국출원	<input type="checkbox"/> 유 (이유:) <input type="checkbox"/> 무		
KEY WORD	CDMA, 위치추적		

법제특허부
기재사항

접수일	200 년 월 일	대리인	피닉스	전담자관리번호	042002-03-0002
국내출원	<input checked="" type="checkbox"/> 특허 <input type="checkbox"/> 실용 <input type="checkbox"/> 공개기보 <input type="checkbox"/> 출원보류(이유:)				
	심사청구	<input checked="" type="checkbox"/> 유 <input checked="" type="checkbox"/> 무	전략특허PROJECT명	C	
외국출원	<input type="checkbox"/> 유 <input type="checkbox"/> 무		출원등급	B	
	심의여부	<input type="checkbox"/> 유 <input type="checkbox"/> 무	*대리인 특허명세서작성 참조사항*		
출원 국 가 선 정	<input type="checkbox"/> 개별국출원 <input type="checkbox"/> EP0출원 <input type="checkbox"/> PCT출원			<input type="checkbox"/> 사무소 자체 국내출원 <input checked="" type="checkbox"/> 특허팀검토후 국내출원	
	1순위		5순위	<input type="checkbox"/> 국내외 동시출원	
	2순위		6순위		
	3순위		7순위		
	4순위		8순위		
비고				검토 의견	OK.





< 발명 평가내용 >				
구 분	내 용		평가점수	
기 술 성	단순 조합 기술임		<input type="checkbox"/> 1점	
	약간 높은 수준을 요하는 기술임		<input type="checkbox"/> 3점	
	고도의 수준을 요하는 기술임		<input type="checkbox"/> 5점	
실현가능성	이론상 실현은 가능하나, 실험계획은 없음		<input type="checkbox"/> 1점	
	테스트 하려면 관련기술의 발전이 요구됨		<input type="checkbox"/> 2점	
	테스트중이거나 예정임		<input type="checkbox"/> 3점	
	양호한 테스트 결과 얻음(자료첨부 가능)		<input type="checkbox"/> 5점	
	현재 사업화 준비중 또는 실시중임		<input type="checkbox"/> 7점	
효 과	개선된 효과의 수준은? (공정 단순화, Yield, Cost 등의 측면)		<input type="checkbox"/> 3점 <input type="checkbox"/> 2점 <input type="checkbox"/> 1점	
발명중요도	기술공개로 타사 권리확보를 방어하는 수준임		<input type="checkbox"/> 1점	
	양산에 적용(예정) 가능한 발명임		<input type="checkbox"/> 3점	
	반드시 필요한 독점 기술임		<input type="checkbox"/> 5점	
평가결과			() 점	
<p>주)※상기 발명 평가표는 반드시 실장이 직접 기재하시기 바랍니다.</p> <p>※"실현가능성"란에서 5점,7점에 해당된 발명은 증빙 자료가 반드시 필요 합니다.</p> <p>※평가를 완료하신후 평가결과를 기입 바랍니다.</p>				
< 외국출원 평가내용 >				
발명의 적용제품 현 황	*적용제품:	*복수제품에 적용되는 경우 전부 기재하시기 바라며, 향후 적용 제품경우 예상시점을 기재요망		
	*관련기술:			
	*적용시기:			
평가내용	<input type="checkbox"/> 절대 필요 <input type="checkbox"/> 국내출원후 1년간 관망 <input type="checkbox"/> 필요 없음		출원희망국가	
	<input type="checkbox"/> 개별국출원, <input type="checkbox"/> EP0출원, <input type="checkbox"/> PCT출원 <u>기술적측면</u>		1순위	
			2순위	
			3순위	
			4순위	
			5순위	
			6순위	
			7순위	
			8순위	
	<u>경제적측면</u>		평가자	
		성명: 직위: 서명:		

社 外 秘

발명자 인적사항	발명자 1	성명	(한글) 조 춘 근	() 개발 Group () 실				
			(한문) 曹 椿 謹	직위	사번	H28469	TEL (829) (- 7414)	
			(영문) ChoonGeun Cho	주민등록No	118-201 -			
		E-mail	double	주소	(-) 서울 광화문가 자택동 자택서명 191		서명	김진
	발명자 2	성명	(한글) 유 인 호	() 개발 Group () 실				
			(한문) 劉 仁 鎬	직위	과장	사번	H19343	TEL (829) (- 7401)
			(영문) You In ho	주민등록No	660203 -			
		E-mail	ihyou@hyspc.com	주소	(-) 서울 성북구 정릉동 87가 하우지 2-14		서명	유인호
	발명자 3	성명	(한글) 김 대 중	() 개발 Group () 실				
			(한문) 金 大 中	직위	사번	H18436	TEL (829) (- 7414)	
			(영문) Kim Dae Jong	주민등록No	61-304 -			
		E-mail	fordj	주소	(-) AIA 서울 광화문 신연로 한성아파트		서명	김대중
	발명자 4	성명	(한글) 양 호 용	() 개발 Group () 실				
			(한문) 梁 虎 龍	직위	사번	H18075	TEL (829) (- 7443)	
			(영문) YANG HO YONG	주민등록No	721231 -			
		E-mail	liger	주소	(-) 서울시 모란구 금원1동 596-31 3층 31호		서명	양호용
	발명자 5	성명	(한글)	() 개발 Group () 실				
			(한문)	직위	사번	TEL ()		
			(영문)	주민등록No	-			
		E-mail		주소	(-)		서명	
	발명자 6	성명	(한글)	() 개발 Group () 실				
			(한문)	직위	사번	TEL ()		
			(영문)	주민등록No	-			
		E-mail		주소	(-)		서명	

주1. 주소는 상세히 기재하시고, E-mail은 반드시 회사계정으로 기재하시기 바람.

2. 영문기재시 Fullname을 기재하시기 바람.

양 도 증				
양수인	경기도 이천시 부발읍 아미리 산 136-1			
	주식회사 현대시스콤 대표이사 장 성 익			
양수일	년 월 일			
<p style="text-align: center;">하기의 발명에 관하여 국내 및 외국에 지적재산권 등록을 받을 수 있는 제권리를 상기 양수인에게 양도합니다.</p>				
발명의 명칭				
발명의 개요	(신규 또는 개량된 부분을 중심으로 기재하십시오.)			
양도인	성 명	서 명	주민등록번호	주 소 (자세히 기재)
	한자 (曹椿漢) 영문 (Cho Chan Geun)		690201-	서울시 송파구 가락동 시영 아파트 118-311호
	한자 (劉仁鎬) 영문 (You In ho)		660203	서울시 성북구 정릉4동 809 중앙하이츠 아파트 2-1102
	한자 (金大中) 영문 (Kim Dae Jong)		690904	서울시 서초구 잠실5동 한신아파트 314-1211
	한자 (梁虎龍) 영문 (Yang Ho Yung)		121231-	서울시 노원구 공릉1동 596-31 3층 301호
	한자 () 영문 ()			
	한자 () 영문 ()			
	<p>註) 1. 공동발명의 경우, 전원이 양도인에 기재하고 서명하시기 바람. 2. 영문 성명 기재시 Full Name을 기재하시기 바람.</p>			

HYUNDAI SYSCOMM

Confidential

Employee's Declaration of Invention

Date: Month/Day/Year

Invention Team	Approval	Work Code		Approving Authority	On-the-job Maintenance Team	Reviewer	Patent Team	Approval	Work Code		Approving Authority
		Primary Inventor	Reviewer	Approved by					Drafter	Reviewer	Approved by
		signed		signed					signed	signed	signed
	Position / Name	GJ/ CHO, Choon Geun		BJ/HAN, M. J.	/	Position / Name	SW/LEE, Chun Mi	DL/YOON, Hyoung Jin			
	Date	/	/	/	Control No.	Date					
Years in Storage	0, 1, 2, 3, 5, 10, Permanent				Years in Storage	1, 3, 5, 10, P	Security Rating	1, 2, 3, Confidential			

Under the provisions of the employee's invention compensation policy, I request to proceed with the filing/registration of my invention and to assign its rights for domestic and international registrations.

Statement by Inventor	Title of the Invention	SMALL-SIZED AND LOW-POWER CONSUMING CDMA WIRELESS TRANSMISSION/RECEPTION APPARATUS APPROPRIATE FOR TRACKING PEOPLE/OBJECT		
	Summary of the Invention	The present invention relates to an apparatus of wireless transmission and reception, which employs a CDMA technology that is appropriate when a user is not able to manipulate a wireless transmission/reception apparatus in tracking a position of people/object, or it is difficult to portably carry the apparatus. The wireless transmission/reception apparatus includes: a basic function accessible to the conventional CDMA mobile communication networks; a current position extracting function using a GPS chip or a position information extracting algorithm; a wireless transmission/reception function for notifying extracted position information, user identification information and an emergency condition of the user; and an alarm function for notifying current situation to people adjacent to people/object having the wireless transmission/reception apparatus.		
	Name(s) of Related Projects			
	Status of the Embodiment	<input type="checkbox"/> Conception <input type="checkbox"/> Completed Design <input type="checkbox"/> (In, Completed) Testing <input type="checkbox"/> (Preparing, In) Business Implementation		
	Publication Status of the Invention	<input type="checkbox"/> Unpublished <input type="checkbox"/> Expected to be Published ※ <input type="checkbox"/> Published Earlier ※ ※ If checked, please specify the (scheduled) date of publication and related dissertations. [(Scheduled) Date of Publication: Month Day, 2000; Related dissertations:]		
	Prior Art	Korean		
		Foreign		
	Filing Term	<input type="checkbox"/> Standard <input type="checkbox"/> Urgent → (Within days)	Reason for Urgent Filing	
Foreign Filing	<input type="checkbox"/> Yes (Reason:) <input type="checkbox"/> No			
Key Word	CDMA, position tracking			

Statement by Patent Team	Date of Receipt		Agent	Phoenix	Hyundai Syscomm Ref.	CM20032-08-0002	
	Korean Filing	<input checked="" type="checkbox"/> Patent <input type="checkbox"/> Utility Model <input type="checkbox"/> Journal of Technical Disclosure <input type="checkbox"/> Withhold Filing (Reason:)					
		Request for Examination	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Strategic Patent Project for the Invention		60	
	Foreign Filing	<input type="checkbox"/> Yes <input type="checkbox"/> No		Filing Rating	B		
		Deliberation	<input type="checkbox"/> Yes <input type="checkbox"/> No		*Remarks for Agents writing the specification*		
	Designating Countries to File	<input type="checkbox"/> Direct National Filing <input type="checkbox"/> EPO Filing <input type="checkbox"/> PCT Filing			<input type="checkbox"/> Domestic filing without Review <input checked="" type="checkbox"/> Domestic filing after Patent Team Review <input type="checkbox"/> Simultaneous Korean & Foreign Filing		
		1st Priority		5th Priority		Reviewer's Opinion	OK
2nd Priority			6th Priority				
3rd Priority			7th Priority				
4th Priority			8th Priority				
Note							

HYUNDAI SYSCOMM

Statement by Manager of Invention Team	< Evaluation of the Invention >		
	Category	Contents	Evaluation Grade
	Technology	Simple technology	<input type="checkbox"/> 1 point
		Slightly higher technology	<input type="checkbox"/> 3 point
		Advanced technology	<input type="checkbox"/> 5 point
	Possible Implementation	Theoretically possible to implement, but has no plan for testing	<input type="checkbox"/> 1 point
		Developments in related technologies are required first for testing	<input type="checkbox"/> 2 point
		Currently testing or planning to test	<input type="checkbox"/> 3 point
		Tested and obtained satisfactory results (Attach Documents)	<input type="checkbox"/> 5 point
		Preparing or currently implementing into one's business	<input type="checkbox"/> 7 point
	Effects	What is the level of improvement? (Simplification of processes, yield, cost etc.)	<input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 point
	Importance	Defending the rights in disclosing the technology	<input type="checkbox"/> 1 point
		Adaptable (or scheduled) for mass production	<input type="checkbox"/> 3 point
		Absolutely necessary to obtain exclusive technology	<input type="checkbox"/> 5 point
	Evaluation Result		() Point
Note: ※ The Invention Evaluation form must be filled out by the manager of the invention team. ※ Evidence is necessary for those inventions that are rated 5 or 7 points in the section of "Possibility for Implementation." ※ The Evaluation Result should be filled in only after completing the Evaluation.			
<Evaluation for Foreign Filing>			
Status of products to which the invention was applied	* Applied Product:	* For cases applied to multiple products, list all product names. For future cases to be applied, mark the estimated period.	
	* Related Technology:		
	* Applied Period:		
Evaluation	<input type="checkbox"/> Absolutely necessary <input type="checkbox"/> Observe for a year after filing domestically <input type="checkbox"/> Not necessary	Designation of Countries	
		1st Priority	
		2nd Priority	
	<input type="checkbox"/> Direct National Filing <input type="checkbox"/> EPO Filing <input type="checkbox"/> PCT Filing	3rd Priority	
		4th Priority	
		5th Priority	
	Technological Factor	6th Priority	
		7th Priority	
		8th Priority	
	Economical Factor	Evaluator Name: Position: Signature:	

HYUNDAI SYSCOMM

Inventor Information	Primary Inventor	Name	(Korean) 조 춘 근	() Development Group () Team					
			(Chinese) 曹 椿 謹	Position		Employee ID No.	H28469	Tel (829-7414)	
			(English) Choon Geun Cho	Residence ID	690201-*****				
		E-mail	double	Address	Siyeong Apt. 118-311, Garak-dong, Songpa-gu,, Seoul			Signature	signed
	Joint Inventor	Name	(Korean) 유 인 호	() Development Group () Team					
			(Chinese) 劉 仁 鎬	Position	GJ	Employee ID No.	H19348	Tel (829-7402)	
			(English) You In Ho	Residence ID	660203-***** %				
		E-mail	ihyou@hysyscom.com	Address	Heights Apt. 2-1102, 809 Jeongneung 4-dong, Seongbuk-gu, Seoul			Signature	signed
		Name	(Korean) 김 대 중	() Development Group () Team					
			(Chinese) 金 大 中	Position		Employee ID No.	H18436	Tel (829-7414)	
			(English) Kim Dae Joong	Residence ID	670304-***** %				
		E-mail	fordj	Address	Sinbanpo Hansin Apt. 314-1211, Jamsil-dong, Seocho-gu, Seoul			Signature	signed
		Name	(Korean) 양 호 용	() Development Group () Team					
			(Chinese) 梁 虎 龍	Position		Employee ID No.	H18075	Tel (829-7403)	
			(English) YANG HO YONG	Residence ID	721231-***** %				
		E-mail		Address	#301, F3, 596-31 Gongneung 1-dong, Nowon-gu, Seoul			Signature	signed
		Name	(Korean)	() Development Group () Team					
			(Chinese)	Position		Employee ID No.		Tel ()	
(English)	Residence ID								
E-mail		Address				Signature			
Name	(Korean)	() Development Group () Team							
	(Chinese)	Position		Employee ID No.		Tel ()			
	(English)	Residence ID							
E-mail		Address				Signature			

Note: 1. The full address and e-mail address are required.
2. Write the full name in English.

ASSIGNMENT				
Assignee	San 136-1, Ami-ri, Bubal-eup, Icheon-si, Gyeonggi-do			
	Hyundai Syscomm, Inc. (Representative: Seong Ick Jang)			
Date of Assignment	Year/Month/Day			
I/We, the below-named assignor(s) duly assign(s) may/our entire domestic and international rights to proceed with the filing/registration of intellectual property for the invention as indicated below.				
Title of Invention				
Summary of Invention	(Describe novel or improved parts of the invention.)			
Assignor(s)	Name	Signature	Residence Reg. No.	Address (in detail)
	曹 榕 湮 Choon Geun Cho	<i>signed</i>	690201-*****	Siyeong Apt. 118-311, Garak-dong, Songpa-gu., Seoul
	劉 仁 鎬 You In Ho	<i>signed</i>	660203-*****	Heights Apt. 2-1102, 809 Jeongneung 4-dong, Seongbuk-gu, Seoul
	金 大 中 Kim Dae Joong	<i>signed</i>	670304-*****	Sinbanpo Hansin Apt. 314-1211, Jamsil-dong, Seocho-gu, Seoul
	梁 虎 龍 YANG HO YONG	<i>signed</i>	721231-*****	#301, F3, 596-31 Gongneung 1-dong, Nowon-gu, Seoul
Note) 1. In case of joint-inventorship, the entire inventors must write their names as assignors and sign respectively. 2. Write the full name in English.				

1. 발명의 명칭

대인/대물의 위치추적에 적합한 저전력형 다기능 소형 CDMA 무선송수신 장치

2. 발명의 상세한 설명

1) 산업상의 이용분야

본 발명은 대인/대물의 위치추적에 있어 무선송수신 장치를 조작할 능력이 없거나 휴대하기가 힘든 대상에 적합한 부호분할 다중접속(CDMA) 기술을 이용하는 무선송수신 장치에 관한 것으로, 기존 CDMA 이동통신망에 접속할 수 있는 최소의 기능, 위치정보 추출 기능, 위치/개인식별 정보 및 휴대자의 긴급상황을 알릴 수 있는 무선송신 기능, 무선송수신 장치를 휴대한 대인/대물의 주위 사람들에게 현재 처한 상황을 알려줄 수 있는 외부알림 기능, 무선식별시스템(RFID)을 이용한 개인정보 제공 기능 및 개선된 이동통신망 등록 알고리즘을 통한 저전력 소모 기능 등을 갖는 부호분할다중접속(CDMA) 무선송수신 장치에 관한 것이다.

본 발명은 이동통신망 접속을 위한 최소 기능만 구현되어 있으므로 현재 사용중인 이동통신 단말기의 화면표시 장치나 키패드 등과 같은 부가 장치를 없앨 수 있고, 정보의 전송시 페이징(호출) 채널 및 액세스 채널을 이용하는 단문문자서비스(SMS) 기능을 이용하고, 개선된 이동통신망 등록 알고리즘을 이용함으로써 전력 소모를 최소화 할 수 있어 무선송수신 장치의 소형화가 가능해지고 따라서 유아, 애완견 등 특히 장치를 휴대하기가 힘들거나 조작 능력이 없는 대상체에 적용할 수 있는 장점이 있다. 또한, 어린이 및 애완견 등이 길을 잃거나 귀중품의 도난, 분실등의 경우 주변의 사람들에게 이를 알릴 수 있는 수단이 있고, 독거 노인등의 갑작스런 발병 및 강도 등과 같은 위급한 범죄 상황에서도 간단한 무선송수신 장치의 조작에 의해 위급 상황을 통제센터에 통보함으로써 신속히 대처할 수 있게 하는 장점이 있다.

2) 종래기술의 설명 및 그 문제점

등록번호 : 20-0164185 "이동통신 전화망을 이용한 위치추적장치"

공개번호 : 특 2002-0004534 "단말기 위치추적 장치 및 그 방법"

공개번호 : 특 2003-0022613 "미아방지 시스템"

최근 이동통신 전화사업자 등에서 실시하고 있는 위치 확인 서비스에 적용된 무선 휴대장치는 화면표시 장치나 키패드 등과 같은 부가 장치가 있고, 정보의 송수신시 트래픽(통화) 채널의 사용 및 고속 이동시 CDMA 이동통신망에 자주 등록하게 됨으로써 전력소모가 많아 배터리의 소형화가 어려운 등의 단점이 존재하여 무선송수신 장치의 소형화가 힘들게 되고 따라서 유아, 애완견 등 특히 장치를 휴대하기가 힘든 대상체의 유괴, 실종과 같은 사고 상황에 맞는 위치 발신장치로서 부적합한 문제점이 있다. 또한, 미아, 실종 같은 사고 상황에서 주변 사람들에게 현재 상황을 전달할 수 있는 외부알림 기능이 없고, 독거노인의 발병, 긴급환자 등 무선휴대 장치의 조작 능력이 없거나 어려운 경우 간단한 조작을 통해 보호자에 대해 통보할 수 있는 수단이 없으며 환자의 경우 개인신병 정보등이 부재하여 긴급 조치를 취하는데 어려움이 있다.

대한민국 특허 등록번호 20-0164185 "이동통신 전화망을 이용한 위치추적장치"에서는 이동통신 사업자 전화망의 통신규격인 부호분할 다중접속 기술에 일치하는 전파를 주기적으로 발신하는 소형의 신호발신장치와 이 신호를 수신하여 위치정보와 비상호출 정보를 감지하여 처리하는 이동통신 수단을 이용한 위치추적 장치에 대해 서술하고 있다. 그러나, 유아, 애완견, 치매노인 그리고 자가용과 같은 사물처럼 이동 단말기 휴대자의 직접적인 조작이 불가능하거나 조작 능력이 없는 경우에 비상호출 기능은 적절하지 못하고 대상체의 현재 상황을 주위에 알릴 수 있는 기능이 없어 주변으로부터 도움을 얻을 수 없으며 특히, 기존의 이동통신 전화망에서 단말기의 위치정보 송신을 위해 전파를 주기적으로 발신하는 경우 소형 단말기의 전원 소모가 심해 서비스 이용자가 모르는 사이에 전원이 소모되어 정상적인 위치 판단이 불가능해지는 단점이 있으며, 이와 같은 서비스를 제공하기 위해 기 서비스 중인 이동통신 사업자의 시스템에 부가 장비를 첨가하거나 기능을 수정해야 하는 문제점이 있으며, 기지국 단위의 등록에 의해서만 위치정보를 추출할 수 있어 정확한 위치정보를 획득하는데는 어려움이 있다.

대한민국 특허 공개번호 특 2002-0004534 "단말기 위치추적 장치 및 그 방법"에서는 서비스 사용자에게 대상체의 현재 위치에 대한 정보를 제공할 수 있는 방법과 위치정보 관련 기록매체에 대해 서술하고 있고, 공개번호 특 2003-0022613 "미아 방지 시스템"에서는 위성위치확인 시스템(GPS) 장치를 이용 추출된 대상체의 위치정보를 인터넷을 통해 사용자에게 제공하고 피보호자가 보호자가 설정한 경로를 이탈할 경우 보호자에게 알려주어 미아발생을 방지할 수 있는 방법에 대해서만 서술하고 있다.

상기한 발명들은, 분실, 도난, 길을 잃었을 경우 대상체의 주변 사람들에게 현재 상황을 인식시킬 수 있는 수단이 없고, 대상체의 대략적인 위치만 파악할 수 있어 신속한 상황 처리가 힘들며, 위치정보 서비스를 제공하기 위해 별도의 무선통신 시스템을 갖추어야 한다. 또한, 기존의 CDMA 이동통신망을 이용하는 경우 시스템에 추가 기능을 첨가하거나 수정해야 하며, 무선송수신 장치의 전력 소모가 심해지는 등의 문제점이 있어 무선송수신 장치의 소형화가 어렵게 되고 따라서 유아, 애완견 등 무선송수신 장치를 휴대하기가 힘들거나 조작 능력이 없는 대상체에 적용하기에 적합하지 않다.

3) 종래 문제점을 해결하기 위한 본 발명의 기술적 원리

본 발명은 상기한 문제점을 해결하기 위해 기존의 CDMA 이동통신 전화망을 이용하는 이동 단말기의 기능 중 이동통신망 접속에 필요한 CDMA 필수 기능 및 위성위치확인시스템(GPS) 칩/위치추출 알고리즘 등을 이용한 위치정보 추출 기능, 푸쉬 버튼과 같은 간단한 조작을 통해 보호자에게 보다 정확한 위치정보 및 긴급상황을 통보할 수 있는 기능, 피보호자 주위 사람에게는 음성 등을 이용하여 비상상황을 인식시킬 수 있는 기능, 무선인식시스템(RFID : Radio Frequency Identification)를 이용한 개인신상 정보 제공 기능 및 전력소모의 최소화를 위해 개선된 등록절차를 수행하는 기능을 갖는 무선송수신 장치를 제공하는데 그 목적이 있다.

4) 본 발명의 구성 및 그 전반적인 동작설명

상기와 같은 목적을 달성하기 위한 본 발명의 대인/대물의 위치추적에 적합한 저전력형 다기능 소형 CDMA 무선송수신 장치는 이동 통신망 접속을 위한 IS-95, IS-2000 등 표준 규격을 따르는 기본 CDMA 기능 및 개선된 시스템 등록 알고리즘, 위치정보 추출 기능, 비상호출 기능, 외부알림 기능 및 개인신상 정보 제공 기능 등으로 이루어진 특징이 있다.

이하, 첨부된 도면에 의거하여 본 발명의 바람직한 일 실시예를 상세히 설명하면 다음과 같다.

도 1은 현재 서비스 중인 CDMA 이동통신망을 이용한 대인/대물의 위치추적 및 관리장치의 전체 구성도로서, 부호 110은 도 2에 상세히 설명되어 있는 현재 서비스중인 CDMA 이동통신망과 접속할 수 있는 소형의 무선송수신 장치로써 시계나 목걸이 등과 같이 휴대가 편리하도록 제작하는 것이 바람직하다. 120은 상기 무선송수신 장치(110)에서 나오는 신호를 수신하고 필요한 정보를 발신할 수 있는 CDMA 이동통신망의 기지국이며, 130은 여러 개의 기지국을 제어하는 기지국 제어기, 140은 교환기 및 방문자 위치 등록 장치(VLR : Visitor Location Register)이고, 150은 홈 위치등록 장치 및 CDMA 이동단말기 인증 장치이다. 또한, 160은 상기 기지국(120)을 통해 접수된 대인/대물의 위치 정보를 보정 및 관리하며, 대인/대물의 비상 호출을 감지할 수 있고, 보호자의 요구가 있을 경우 대인/대물에 위치정보를 요구하는 호출기능 및 피보호자 주변에 긴급상황 통보의 기능을 수행할 수 있는 위치정보 관리서버이다. 170은 페이징 및 액세스 채널을 이용하는 단문문자 서비스(SMS : Short Message Service) 서버이다.

도 2는 본 발명에 의한 저전력형 다기능 소형 CDMA 무선송수신 장치(110)의 구성 블록도로서, 부호 210은 CDMA 방식을 적용하여 운용중인 기존 이동통신망에서 본 발명에 요구되는 최소의 기능 즉, 파일럿 채널, 동기 채널, 페이징 채널 수신, 액세스 채널 전송을 위한 기본 기능 및 본 발명에서 제안된 도 4의 무선송수신 장치의 전력 소모 최소화를 위한 등록판단 방법이 내재되어 있는 모듈이고, 220은 위성위치확인 시스템(GPS : Global Positioning System) 칩 또는 단말의 위치정보 추출 알고리즘 등을 이용한 위치정보 추출 기능 모듈이며, 230은 사용자의 비상 상황을 푸쉬 버튼과 같이 간단한 조작을 통해 위치정보 관리서버(160)에 통보할 수 있게 하는 비상호출 장치이다. 또한, 240은 개인신상 정보 등을 제공할 수 있는 무선인식시스템(RFID) 모듈, 250은 대인/대인의 주변에 미아, 도난 등의 현재 상황을 스피커 등을 통해 알릴 수 있게 하는 예를 들면, “저는 길을 잃었습니다. 가까운 경찰서나 전화번호 02-xxxx-xxxx 로 연락해 주세요” 등의 정보를 알려주는 외부 알림 기능, 260은 비상호출 관련 정보 및 외부 알림음 등이 저장되어 있는 메모리, 270은 이와 같은 기능들을 제어하는 제어기이며, 280은 전원 장치이다.

도 3은 보호자의 위치정보 또는 외부알림 요청과 피보호자 또는 주변 사람들의 비상호출 요청시 전체적인 흐름도로서, 보호자가 위치정보 관리서버(160)에 위치정보/외부알림을 요청하면 위치정보 관리서버에서는 이동통신망(SMS 서버 포함)을 이용하여 무선송수신 장치(110)에 메시지를 전달한다. 무선송수신 장치내의 CDMA 기본 기능(210)이 메시지를 수신하면 제어기(270)는 메시지를 해독하여 위치정보 요구일 경우 위치정보 추출기능(220)을 이용하여 위치정보를 추출한 후 CDMA 기본 기능을 이용 위치정보 관리서버에 알려주게 되고 위치정보 관리서버는 유/무선, 인터

넷 등의 방법을 통해 보호자에게 현재 피보호자의 위치에 대한 정보를 알려주게 된다. 한편, 외부 알림 요청의 경우, 제어기(270)는 메시지를 해독하여 메모리에 저장되어 있는 외부알림 패턴을 선택하여 외부알림 기능을 통해 외부에 현재 피보호자가 처한 상황을 알려주게 된다. 이때, 외부 알림 기능(250)의 구현은 상기한 바와 같이 일정한 패턴을 미리 메모리에 저장할 수 도 있고, 컨텍터 등을 통한 외부에서의 직접 입력 또는 위치정보 관리서버에서 지시한 내용을 음성합성칩 등을 이용 스피커 등의 외부알림 장치를 통해 주변 사람들에게 알려줄 수 도 있다. 도 3의 피보호자에 의한 비상호출은 긴급 상황에 처한 피보호자 및 주변 사람들에 의해 푸쉬버튼과 같은 장치를 통하여 간단히 요청될 수 있는데 일단 비상호출 기능(230)을 통한 비상호출 요구가 요청되면 제어기(270)는 피보호자의 현재 위치정보를 추출한 후 메모리에 저장되어 있는 긴급상황임을 알려줄 수 있는 정보와 함께 위치정보를 위치정보 관리서버에 전달하게 되고, 위치정보 관리서버는 이의 상황을 보호자에게 통보하게 된다. 또한, 피보호자가 환자일 경우 병원 등에서는 무선송수신 장치의 내부에 탑재되어 있는 무선인식시스템(RFID)를 이용하여 피보호자의 과거 상태를 파악하여 신속한 조치를 취할 수 있다.

도 4은 본 발명에서 제안하는 휴대용 무선송수신 장치(110)의 전원 소모 최소화를 위해 기존 CDMA 이동통신망에서 수행하고 있는 등록절차를 수정하여 제안한 순서도로, 기존 통신사업자의 시스템의 수정을 요구하지 않고 단말기 자체에서 동작하는 구조이다. 실제 핸드폰과 같은 CDMA 단말기에서의 전원 소모는 통화 중 가장 심하고, 그 이외에는 시스템에 현재 위치에 대해 등록할 경우이다. 따라서, 빈번한 사용자 등록은 본 발명이 목표로 하는 소형의 이동 단말기에는 적합하지 않고 일반적으로 CDMA 시스템에서 페이징(호출)도 하나의 기지국 영역에서 수행하지 않고 몇 개의 기지국 영역을 묶은 단위로 수행하므로 본 발명에서 제안하는 등록판단 방법은 단말기(110)의 전원 소모를 최소화 하는데 효과가 있다. 현재 운용되고 있는 CDMA 이동통신망에서의 단말기 등록은 총 8개의 등록 방법 중 이동통신 사업자가 시스템 최적화를 통해 임의로 수행하고 있으며 시스템 파라미터 메시지 속에 포함하여 단말기에 전송한다. 본 발명에서는 기지국에서의 단말기(110)의 전원을 켤 때 자동적으로 수행되는 등록(power on registraion), 명령(order)에 의한 등록, 거리 기준 등록 (distance based) 및 시간 기준 (timer based) 등록 방법을 적절히 조합하여 휴대 단말의 등록을 수행한다. 도 4를 자세히 설명하면, 먼저 단말기의 전원을 켜면 이동통신 사업자에게 자동적으로 등록이 수행되고(410), 단말기에서는 시간 및 거리 기준 타이머가 초기화 된 후(415), 현재의 위치가 계산된다(420). 기지국에서 강제적 명령에 의한 등록이 요구되면 무조건 등록을 수행하고(410, 415, 420 수행), 그렇지 않은 경우는 거리와 시간의 적절한 조합에 의해 단말기가 스스로 등록 수행 여부를 결정하게 된다. 대인/대물이 고속으로 이동하는 경우 빈번한 등록을 방지하기 위해 거리 기준 타이머가 종료되면(430) 현재 위치를 계산하고(435), 만약 임계치 2 거리 이상 차이가 발생하면 등록을 수행한다(440). 그러나 임계치 2 이하일 경우는 시간기준 타이머의 상태에 따라 등록을 결정한다. 즉, 시간기준 타이머가 종료된 상황에서 임계치 1 거리 이상 위치 변동이 있을 경우 등록을 수행하고(460), 그렇지 않은 경우는 시간기준 타이머를 초기화(455)한 후, 거리기준 타이머를 초기화(450)한다. 또한, 임계치 2 이상 거리 차이가 나지 않고, 시간기준 타이머가 종료되지 않은 경우는 거리기준 타이머만 초기화(450)하여 단말기의 전원 소모를 최소화 시킨다.

6) 본 발명의 효과

상기한 바와 같이 본 발명은, 기존에 서비스 중인 셀룰러, PCS 및 IMT-2000 등과 같은 CDMA 무선통신 시스템을 이용 무선송수신 장치의 소형화 및 휴대성이 가능하여 유아, 치매 노인, 애완견, 자동차 등과 같이 휴대 단말기의 조작 능력이 없거나 휴대하기 힘든 이용자를 대상으로 위치 정보 서비스를 제공하여 길을 잃거나 유괴 등과 같은 비상상황에 신속히 대처할 수 있는 장점이 있다. 위성위치확인 시스템 칩/위치정보 추출 알고리즘을 탑재함으로써 도심과 같은 무선 전파 수신에 열악한 환경에서도 더욱 자세한 위치정보를 제공할 수 있고, 단말기 휴대자 주변에 긴급 상황을 통보하여 주위 사람들의 도움을 얻을 수 있고, 독거 노인등의 갑작스런 발병 및 강도 등과 같은 위험 상황에서도 간단한 단말의 조작에 의해 위급 상황을 통제센터(위치정보 관리서버)에 통보 및 무선인식시스템(RFID)를 이용함으로써 피보호자의 위급 상황에 신속히 대처할 수 있게 하는 장점이 있으며, 도난과 같은 같은 범죄 상황에서도 도난물의 위치 및 이동경로를 추적할 수 있으므로 도난 차량이 범죄에 악용되는 것을 미리 예방할 수 있는 효과가 있다.

3. 발명의 권리보호 범위

청구항 1

CDMA 이동 통신망을 이용한 대인/대물 위치추적에 있어,
파일럿 채널, 동기채널, 페이징 채널을 수신할 수 있고, 액세스 채널을 송신할 수 있는 IS-95, IS-2000 등 표준 규격을 지원하고, 전원 소모 최소화를 위해 도 4 와 같이 본 발명에서 제안된 거리/시간 기준 등록 판단 방법을 탑재한 CDMA 기본 기능(210),
위성위치확인 시스템 칩 또는 위치정보 추출 알고리즘을 이용한 위치정보 추출 기능(220),
간단한 조작을 통해 위치정보 관리서버(160)에 긴급 상황을 알릴 수 있는 비상호출 기능(230),
환자 등의 발병시 개인신상, 병력 등의 정보를 제공하는 무선인식시스템(RFID) 기능(240),
피보호자 주변에 현재 상황을 알릴 수 있는 음성 발호 등을 지원하는 외부알림 기능(250),
개인식별 정보, 상기 비상호출(230) 및 외부알림 기능을(250) 위해 미리 지정된 메시지를 저장할 수 있는 메모리(260) 등으로 구성되어 유아, 애완견 등과 같이 단말기의 조작 능력이 없거나 휴대하기가 어려운 대상체에 적용할 수 있도록 저전력, 다기능의 소형화된 것을 특징으로 하는 무선 송수신 장치

청구항 2

상기 1 항에 있어서, 기존의 CDMA 이동 통신망을 이용하는 단말기의 기능 중 본 발명에서 제안하고 있는 것처럼 파일럿 채널, 동기(싱크)채널, 호출(페이징) 채널 및 액세스 채널의 송수신 기능 등 기존 CDMA 사업자망에 접속할 수 있는 최소한의 기능만 구현하고, 제안된 등록 판단 방법을 이용 저전력을 이용할 수 있어 휴대가 간편한 소형화를 추구한 CDMA 기본 기능(210).

청구항 3

상기 1 항에 있어서, 무선송수신 장치의 소형화가 가능하도록 전원 소모를 최소화 시킬 수 있는 도 4 와 같은 거리/시간 기준 등록 판단 알고리즘

청구항 4

상기 1 항에 있어서, 대인/대물의 주변에 현재 상황을 알릴 수 있는 기능 예를 들면, “저는 길을 잃었습니다. 가까운 경찰서나 전화번호 02-xxxx-xxxx 로 연락해 주세요” 등의 정보를 저장하여 위치정보 관리서버(160) 지시에 의해 외부에 스피커 등을 통해 알릴 수 있는 외부알림 기능(250).

청구항 5

상기 1 항에 있어서, 무선인식시스템(RFID)을 이용하여 긴급 환자 발생시 과거 신상 정보를 얻을 수 있어 신속한 조치를 취할 수 있게 하는 RFID 기능(240).

4. 도면의 간단한 설명

도 1은 기존의 CDMA 이동통신망을 이용한 대인/대물 위치추적 및 관리 장치에 대한 전체 구성도

도면의 주요 부분에 대한 부호의 설명

110 : 휴대용 소형 무선송수신 장치

120 : 기지국

130 : 기지국 제어기

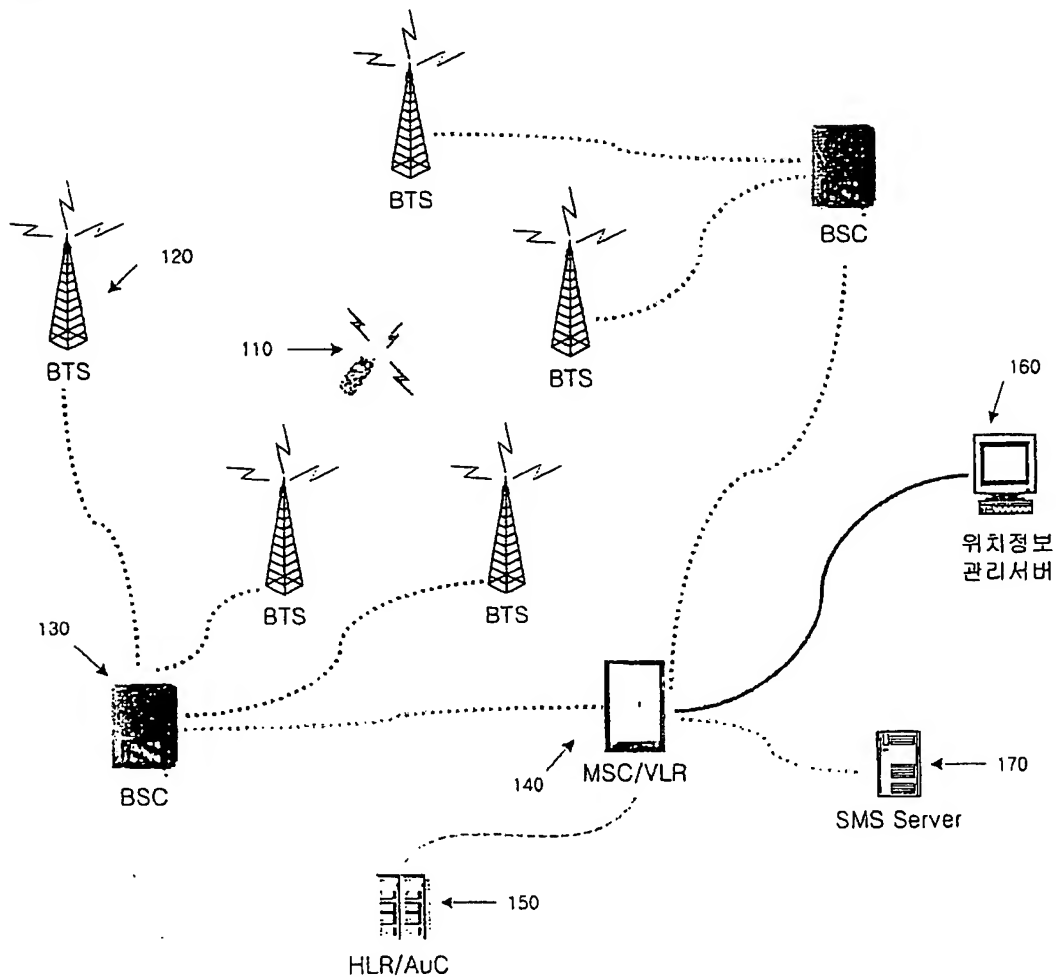
140 : 교환국 및 방문자 위치등록 장치

150 : 홈 위치등록 장치 및 인증 장치

160 : 위치정보 관리서버

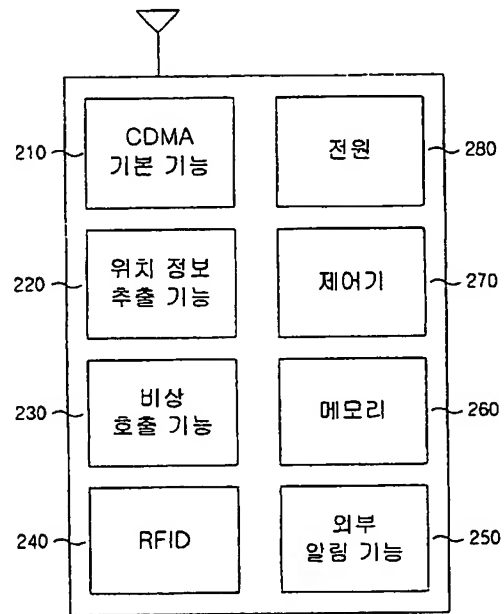
170 : 단문문자 서비스(SMS : Short Message Service) 서버

도면 1



도 2 는 본 발명에 의한 저전력형 다기능 소형 CDMA 무선송수신 장치의 블록 구성도

도 2

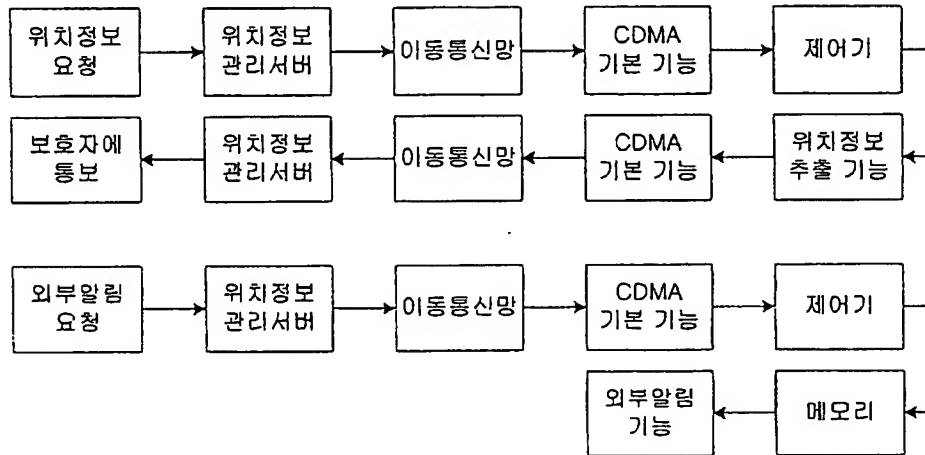


도 3은 보호자의 위치정보 또는 외부알림 요청과 피보호자의 비상호출 요청시의 전체적인 흐름도

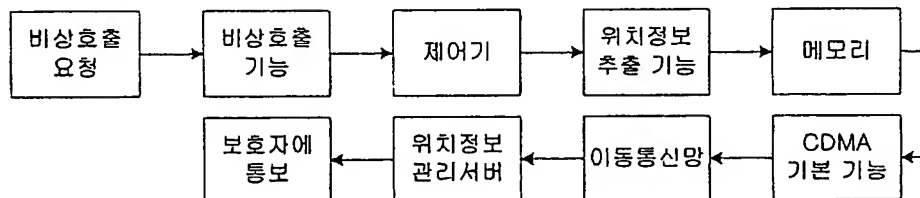
도 3

채색된 부분은 무선송수신 장치(110)의 구성 블록

1) 보호자의 위치정보, 외부알림 요청



2) 피보호자의 비상호출



도 4는 본 발명에서 제안하고 있는 휴대 단말기의 전원 소모를 최소화하기 위한 등록 판단 방법 순서도

도면 4

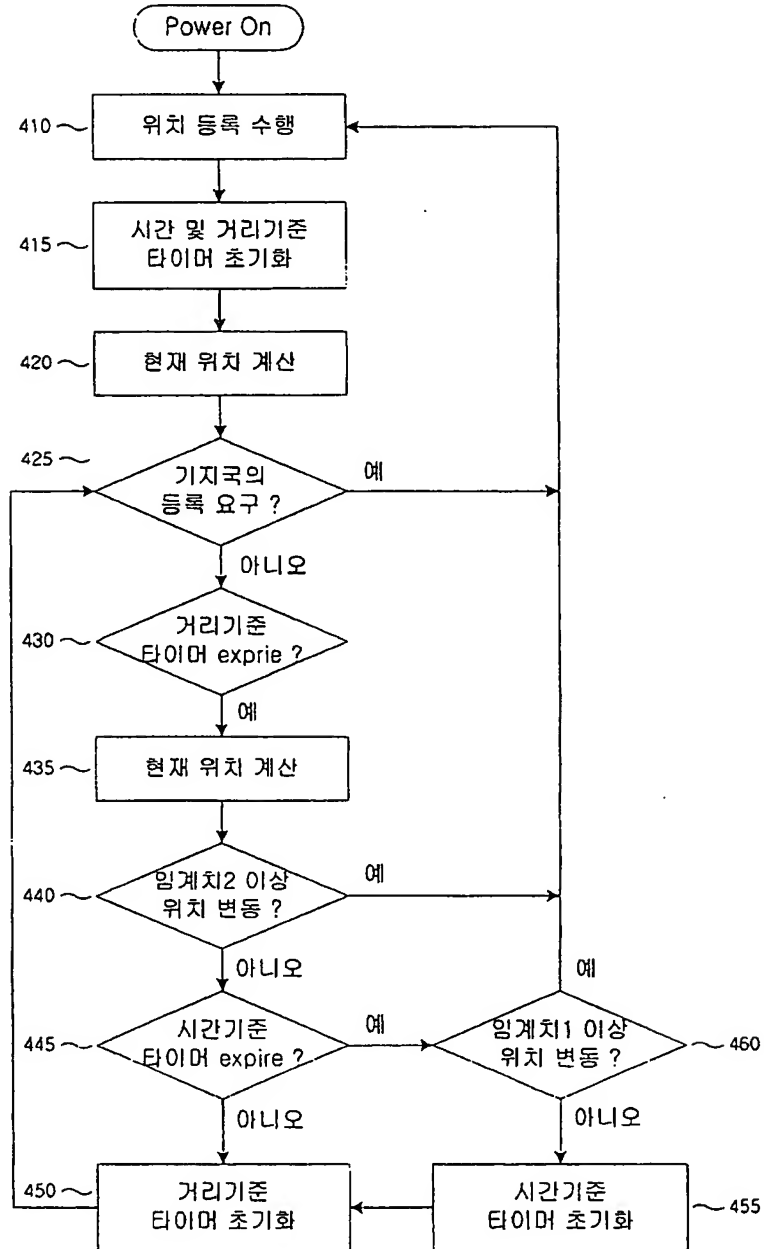


EXHIBIT B

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP COMPANY: 300 SOUTH WACKER DRIVE

**UNITED STATES PATENT AND TRADEMARK OFFICE**

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

MARCH 09, 2007

PTAS

500236859A

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 SOUTH WACKER DRIVE
ROBERT J. IRVINE III
CHICAGO, IL 60606

~~*500236859A*~~

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT SERVICES BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 03/09/2007

REEL/FRAME: 018990/0136
NUMBER OF PAGES: 51

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).
DOCKET NUMBER: 05-616-B; 05-476-C

ASSIGNOR:
HYUNDAI SYSCOMM, INC.

DOC DATE: 04/27/2004

ASSIGNEE:
UTSTARCOM KOREA LIMITED
SAN 136-1, AMI-RI, BUBAL-EUB,
ICHEON-SI
GYEONGGI-DO, DEM REP OF KOREA

467-701

SERIAL NUMBER: 10561351

FILING DATE:

PATENT NUMBER:

ISSUE DATE:

TITLE: METHOD FOR AUTOMATICALLY SETTING A FREQUENCY OF A BASE STATION IN A
CDMA-2000 SYSTEM

USPTO

3. /2007 6:40:47 AM PAGE '005 Fax Server

CDONNELL BOEHNEN HULBERT & BERGHOFF LLP COMPANY:300 SOUTH WACKER DRIVE

018990/0136 PAGE 2

SERIAL NUMBER: 10567529

FILING DATE:

PATENT NUMBER:

ISSUE DATE:

TITLE: APPARATUS AND METHOD FOR TRACKING THE POSITION OF A PERSON/OBJECT
USING A MOBILE COMMUNICATION NETWORK

ASSIGNMENT SERVICES BRANCH
PUBLIC RECORDS DIVISION

PATENT ASSIGNMENT

Electronic Version v1.1
Stylesheet Version v1.1

03/09/2007
500236859

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
Hyundai Syscomm, Inc.	04/27/2004
RECEIVING PARTY DATA	
Name:	UTStarcom Korea Limited
Street Address:	San 136-1, Ami-Ri, Bubal-eub, Icheon-si
City:	Gyeonggi-do
State/Country:	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF
Postal Code:	467-701
PROPERTY NUMBERS Total: 2	
Property Type	Number
Application Number:	10561351
Application Number:	10567529
CORRESPONDENCE DATA	
Fax Number:	(312)913-0002
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
Phone:	3129130001
Email:	docketing@mbhb.com
Correspondent Name:	McDonnell Boehnen Hulbert & Berghoff LLP
Address Line 1:	300 South Wacker Drive
Address Line 2:	Robert J. Irvine III
Address Line 4:	Chicago, ILLINOIS 60606
ATTORNEY DOCKET NUMBER:	05-616-B; 05-476-C
NAME OF SUBMITTER:	Robert J. Irvine III
Total Attachments: 49 source=Assignment as filed#page1.tif source=Assignment as filed#page2.tif	

CH \$80.00 10561351

source=Assignment as filed#page3.tif
source=Assignment as filed#page4.tif
source=Assignment as filed#page5.tif
source=Assignment as filed#page6.tif
source=Assignment as filed#page7.tif
source=Assignment as filed#page8.tif
source=Assignment as filed#page9.tif
source=Assignment as filed#page10.tif
source=Assignment as filed#page11.tif
source=Assignment as filed#page12.tif
source=Assignment as filed#page13.tif
source=Assignment as filed#page14.tif
source=Assignment as filed#page15.tif
source=Assignment as filed#page16.tif
source=Assignment as filed#page17.tif
source=Assignment as filed#page18.tif
source=Assignment as filed#page19.tif
source=Assignment as filed#page20.tif
source=Assignment as filed#page21.tif
source=Assignment as filed#page22.tif
source=Assignment as filed#page23.tif
source=Assignment as filed#page24.tif
source=Assignment as filed#page25.tif
source=Assignment as filed#page26.tif
source=Assignment as filed#page27.tif
source=Assignment as filed#page28.tif
source=Assignment as filed#page29.tif
source=Assignment as filed#page30.tif
source=Assignment as filed#page31.tif
source=Assignment as filed#page32.tif
source=Assignment as filed#page33.tif
source=Assignment as filed#page34.tif
source=Assignment as filed#page35.tif
source=Assignment as filed#page36.tif
source=Assignment as filed#page37.tif
source=Assignment as filed#page38.tif
source=Assignment as filed#page39.tif
source=Assignment as filed#page40.tif
source=Assignment as filed#page41.tif
source=Assignment as filed#page42.tif
source=Assignment as filed#page43.tif
source=Assignment as filed#page44.tif
source=Assignment as filed#page45.tif
source=Assignment as filed#page46.tif
source=Assignment as filed#page47.tif
source=Assignment as filed#page48.tif
source=Assignment as filed#page49.tif

[제41호서식]

공증인가
법무법인 **대종종합법률사무소**

서울·종로구 당주동 160
(번호사회관 303호)
[공증부 736-6604]

Registered No. 2004 - 6060

NOTARIAL CERTIFICATE

DAE JONG LEGAL CORPORATION

160, Dang Joo-Dong, Jong Ro-Ku,
Seoul, Korea



KIM & CHANG

Hannuri Building, 219 Naeja-dong, Jongno-gu, Seoul 110-053, Korea
Telephone: (822) 764-8855 / 2122-3900 Fax: (822) 741-0328 / 745-5954 / 763-7434
E-Mail: all@ip.kimchang.com

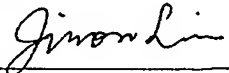
DECLARATION

I, the undersigned, hereby declare:

- (1) That my name, mailing address and citizenship are as stated below;
- (2) That I am knowledgeable in both English and Korean, which are the languages used in relation to the Assignment filed with the Korean Intellectual Property Office; and
- (3) That I have translated said Assignment filed with the Korean Intellectual Property Office into English, a copy of which is attached hereto, and believe that said translation is a true and complete translation of the aforementioned Korean Assignment.

22nd day of November, 2004

Full name of the translator : LIM, Ji Won

Signature of the translator : 

Mailing address : c/o Kim & Chang, Hannuri Building, 219 Naeja-dong,
Jongno-gu, Seoul 110-053, Korea, Republic of Korea

Citizenship : Republic of Korea

KIM & CHANG

[Translation]

ASSIGNMENT

By this instrument, HYUNDAI SYSCOMM, INC., a corporation duly organized and existing under the Laws of Republic of Korea at San 136-1, Ami-ri, Bubal-eub, Icheon-si, Gyeonggi-do 467-701, Republic of Korea do hereby declare that on April 27, 2004 it has assigned and transferred all rights, title and interest in the cases as listed in the attached Schedule I to UTStarcom Korea Limited, a corporation duly organized and existing under the laws of Republic of Korea at San 136-1, Ami-ri, Bubal-eub, Icheon-si, Kyongki-do 467-701, Republic of Korea

IN WITNESS WHEREOF,

I have set my hand hereto this 27th day of April, 2004.

Assignor: HYUNDAI SYSCOMM INC.

By: (SEALED)

Typed Name: SEONG-IK JANG

Position: CEO & President

Schedule 1

NO.	Korean Patent Application No.
1	1996009524
2	1996025985
3	1997007238
4	1997013781
5	1997055585
6	1997055586
7	1997055587
8	1997055588
9	1997060536
10	1997063413
11	1997066033
12	1998004816
13	1998005339
14	1998005341
15	1998005342
16	1998005746
17	1998005748
18	1998005750
19	1998005754
20	1998005756
21	1998005757
22	1998005758
23	1998005759
24	1998005760
25	1998005761
26	1998009741
27	1998009742
28	1998009743
29	1998009744

30	1998009746
31	1998009974
32	1998010163
33	1998010164
34	1998010165
35	1998010166
36	1998010167
37	1998012081
38	1998012281
39	1998013082
40	1998013455
41	1998013793
42	1998013794
43	1998014157
44	1998015007
45	1998015227
46	1998015630
47	1998018666
48	1998018667
49	1998018668
50	1998018669
51	1998018670
52	1998018843
53	1998019773
54	1998019774
55	1998019775
56	1998019968
57	1998027638
58	1998027948

No.	Korean Patent Application No.
59	1998027958
60	1998028181
61	1998028183
62	1998028375
63	1998033895
64	1998034730
65	1998034816
66	1998034817
67	1998034818
68	1998034819
69	1998034820
70	1998035083
71	1998037282
72	1998037283
73	1998037284
74	1998042230
75	1998042231
76	1998042233
77	1998042234
78	1998042235
79	1998042236
80	1998042241
81	1998042243
82	1998042245
83	1998042247
84	1998042250
85	1998045932
86	1998045933
87	1998045937

No.	Korean Patent Application No.
88	1998045938
89	1998048377
90	1998049581
91	1998049584
92	1998052873
93	1998052874
94	1998052875
95	1998052876
96	1998052877
97	1998052878
98	1998052879
99	1998052880
100	1998053384
101	1998055233
102	1998055234
103	1998055238
104	1998055476
105	1998055477
106	1998055478
107	1998055479
108	1998055480
109	1998055481
110	1998055483
111	1998055484
112	1998055487
113	1998057133
114	1998057134
115	1998057486
116	1998059846

117	1998059850
118	1998059854
119	1998059855
120	1998059856
121	1998059859
122	1998059860
123	1998061658
124	1998061659
125	1998061660
126	1998061661
127	1998061667
128	1998061669
129	1998061670
130	1998061766
131	1998061767
132	1998061768
133	1998062159
134	1998062160
135	1998062161
136	1998062163
137	1998062164
138	1998062165
139	1998062166
140	1998062167
141	1998062185
142	1998062190
143	1998062191
144	1998062198
145	1998062199

Korean Patent Application No.	
146	1998062203
147	1998062207
148	1998062779
149	1998062780
150	1998062781
151	1998062783
152	1998062784
153	1998062785
154	1998062787
155	1998062788
156	1998062790
157	1998062792
158	1998062794
159	1998062795
160	1998062796
161	1998062798
162	1998062799
163	1998062800
164	1998062801
165	1998062805
166	1998062806
167	1998062807
168	1998062809
169	1998062811
170	1998062812
171	1998062813
172	1999000293
173	1999000295
174	1999000296

175	1999000297
176	1999000326
177	1999000706
178	1999000707
179	1999000708
180	1999001604
181	1999001609
182	1999003974
183	1999003975
184	1999003977
185	1999004841
186	1999005536
187	1999006956
188	1999006957
189	1999007125
190	1999007561
191	1999008368
192	1999008369
193	1999008370
194	1999008372
195	1999008373
196	1999008548
197	1999009664
198	1999009665
199	1999009666
200	1999009667
201	1999009668
202	1999009669
203	1999009670

204	1999009725
205	1999009727
206	1999009766
207	1999009769
208	1999009771
209	1999009890
210	1999009892
211	1999009893
212	1999009894
213	1999010187
214	1999010192
215	1999010193
216	1999010593
217	1999011565
218	1999011566
219	1999011567
220	1999011568
221	1999011569
222	1999012646
223	1999012647
224	1999012694
225	1999012845
226	1999012847
227	1999012850
228	1999013025
229	1999013026
230	1999013027
231	1999013030
232	1999013083

233	1999013512
234	1999013515
235	1999015234
236	1999015235
237	1999015236
238	1999015237
239	1999015238
240	1999017263
241	1999017344
242	1999017345
243	1999017346
244	1999017582
245	1999017583
246	1999017584
247	1999017665
248	1999017666
249	1999022339
250	1999022340
251	1999022341
252	1999022342
253	1999022344
254	1999022345
255	1999022346
256	1999022348
257	1999023244
258	1999023245
259	1999023246
260	1999023247
261	1999023248

262	1999023250
263	1999023252
264	1999023253
265	1999023254
266	1999023468
267	1999023469
268	1999023493
269	1999023494
270	1999023495
271	1999023496
272	1999026627
273	1999026628
274	1999026630
275	1999026631
276	1999026632
277	1999026879
278	1999027896
279	1999029121
280	1999029122
281	1999029556
282	1999029557
283	1999029614
284	1999029615
285	1999029616
286	1999029617
287	1999029618
288	1999030070
289	1999030166
290	1999030927

291	1999030928
292	1999033686
293	1999034098
294	1999035184
295	1999035185
296	1999035405
297	1999035876
298	1999036626
299	1999036627
300	1999036628
301	1999036629
302	1999036630
303	1999036631
304	1999036632
305	1999036633
306	1999036634
307	1999036635
308	1999036636
309	1999036637
310	1999036639
311	1999036640
312	1999036679
313	1999036681
314	1999036683
315	1999036684
316	1999036685
317	1999036686
318	1999036687
319	1999036691

320	1999036851
321	1999037135
322	1999037136
323	1999037273
324	1999037274
325	1999037275
326	1999037276
327	1999037277
328	1999037278
329	1999037683
330	1999037684
331	1999037830
332	1999037881
333	1999037882
334	1999037883
335	1999037908
336	1999038031
337	1999038032
338	1999038860
339	1999039035
340	1999039036
341	1999039037
342	1999039087
343	1999039088
344	1999039089
345	1999039090
346	1999039091
347	1999039092
348	1999039093

349	1999039094
350	1999039095
351	1999039433
352	1999040092
353	1999040093
354	1999040094
355	1999040162
356	1999040165
357	1999040166
358	1999040991
359	1999042340
360	1999042341
361	1999042342
362	1999042343
363	1999042344
364	1999042345
365	1999042858
366	1999042859
367	1999042860
368	1999042861
369	1999044287
370	1999044288
371	1999044289
372	1999044290
373	1999045391
374	1999045883
375	1999046999
376	1999047168
377	1999047169

378	1999047170
379	1999047171
380	1999047172
381	1999047173
382	1999047174
383	1999047175
384	1999047176
385	1999047177
386	1999047179
387	1999047180
388	1999047181
389	1999047182
390	1999047186
391	1999047967
392	1999047977
393	1999047978
394	1999048512
395	1999048513
396	1999049737
397	1999049738
398	1999049739
399	1999049740
400	1999049928
401	1999049929
402	1999049930
403	1999050402
404	1999050403
405	1999050870
406	1999051355

407	1999052678
408	1999052679
409	1999052680
410	1999052681
411	1999052763
412	1999052764
413	1999052765
414	1999053030
415	1999053031
416	1999053033
417	1999053034
418	1999053035
419	1999053039
420	1999053179
421	1999053418
422	1999055154
423	1999055155
424	1999055156
425	1999055157
426	1999055219
427	1999055221
428	1999055222
429	1999055225
430	1999055226
431	1999055487
432	1999055531
433	1999055532
434	1999055533
435	1999056165

436	1999056226
437	1999056227
438	1999056228
439	1999056610
440	1999056611
441	1999056612
442	1999056613
443	1999056614
444	1999056923
445	1999057757
446	1999058229
447	1999058230
448	1999058231
449	1999059398
450	1999059399
451	1999059710
452	1999059834
453	1999060260
454	1999060263
455	1999060456
456	1999060458
457	1999060460
458	1999060461
459	1999061100
460	1999061103
461	1999061700
462	1999061745
463	1999061746
464	1999061747

465	1999062120
466	1999062778
467	1999063735
468	1999066217
469	1999066218
470	1999066219
471	1999066223
472	1999066224
473	1999066225
474	1999066347
475	1999066348
476	1999066349
477	1999066350
478	1999066351
479	1999067483
480	1999067484
481	1999067485
482	1999067489
483	1999067492
484	1999067495
485	2000001727
486	2000002884
487	2000003097
488	2000003380
489	2000004807
490	2000004808
491	2000005183
492	2000005810
493	2000005940

494	2000005942
495	2000005984
496	2000005985
497	2000005986
498	2000005987
499	2000005988
500	2000005989
501	2000005990
502	2000008064
503	2000008267
504	2000008268
505	2000008269
506	2000008270
507	2000008271
508	2000008272
509	2000008273
510	2000008274
511	2000008432
512	2000008433
513	2000008434
514	2000008435
515	2000008436
516	2000008976
517	2000008977
518	2000008978
519	2000008979
520	2000008980
521	2000009019
522	2000009193

523	2000009600
524	2000009604
525	2000009605
526	2000010121
527	2000010463
528	2000010470
529	2000010471
530	2000010473
531	2000010687
532	2000011289
533	2000011454
534	2000011455
535	2000011752
536	2000012235
537	2000012439
538	2000012440
539	2000012441
540	2000012442
541	2000012443
542	2000012554
543	2000012555
544	2000012557
545	2000014280
546	2000014315
547	2000016016
548	2000016017
549	2000016022
550	2000016024
551	2000016025

552	2000016026
553	2000016027
554	2000016029
555	2000016032
556	2000016033
557	2000016034
558	2000016575
559	2000016578
560	2000016579
561	2000016651
562	2000016948
563	2000016949
564	2000017609
565	2000018586
566	2000018646
567	2000021229
568	2000021231
569	2000021278
570	2000021423
571	2000021425
572	2000021426
573	2000021455
574	2000021926
575	2000022265
576	2000022266
577	2000022267
578	2000022268
579	2000022269
580	2000022550

581	2000022551
582	2000022553
583	2000022554
584	2000022555
585	2000022900
586	2000022902
587	2000022909
588	2000022911
589	2000024687
590	2000024688
591	2000025016
592	2000025018
593	2000025019
594	2000025966
595	2000026433
596	2000026434
597	2000026661
598	2000026662
599	2000027032
600	2000027034
601	2000028287
602	2000028383
603	2000030625
604	2000030627
605	2000032355
606	2000032356
607	2000032357
608	2000034111
609	2000034535

610	2000034536
611	2000035273
612	2000035276
613	2000035453
614	2000035455
615	2000035456
616	2000037914
617	2000038323
618	2000038325
619	2000038326
620	2000042357
621	2000042767
622	2000042768
623	2000044110
624	2000047430
625	2000047844
626	2000051257
627	2000051981
628	2000051982
629	2000051986
630	2000052486
631	2000052487
632	2000052509
633	2000052513
634	2000053506
635	2000055647
636	2000055739
637	2000055740
638	2000056181

639	2000056182
640	2000056183
641	2000056184
642	2000059971
643	2000059972
644	2000059973
645	2000059974
646	2000060365
647	2000063612
648	2000063613
649	2000063614
650	2000063615
651	2000064919
652	2000064920
653	2000064921
654	2000064922
655	2000064923
656	2000064924
657	2000064928
658	2000064929
659	2000064930
660	2000064932
661	2000065109
662	2000065913
663	2000065914
664	2000065915
665	2000065920
666	2000066034
667	2000066091

668	2000066092
669	2000066218
670	2000067638
671	2000067805
672	2000067806
673	2000067807
674	2000067808
675	2000067809
676	2000067811
677	2000071224
678	2000073770
679	2000073771
680	2000074210
681	2000074211
682	2000074212
683	2000074213
684	2000074214
685	2000074215
686	2000074216
687	2000074658
688	2000074661
689	2000076897
690	2000080376
691	2000081200
692	2000081201
693	2000081203
694	2000081204
695	2000082218
696	2000082220

697	2000082221
698	2000082222
699	2000082225
700	2000082227
701	2000082228
702	2000082229
703	2000082230
704	2000082231
705	2000082232
706	2000082233
707	2000082494
708	2000082495
709	2000082496
710	2000082497
711	2000082498
712	2000082896
713	2000082897
714	2000082901
715	2000082903
716	2000084648
717	2000084649
718	2000084650
719	2000084652
720	2000084655
721	2000084656
722	2000084658
723	2000084659
724	2000084660
725	2000085086

726	2000085087
727	2000085094
728	2000085096
729	2000085098
730	2000085099
731	2000085100
732	2000085101
733	2000085102
734	2000086505
735	2000086506
736	2000086514
737	2000086519
738	2000086526
739	2000087469
740	2000087470
741	2000087479
742	2000087483
743	2000087560
744	2000087565
745	2000087566
746	2000087567
747	2000087569
748	2000087592
749	2000087596
750	2000087597
751	2001000043
752	2001002658
753	2001002659
754	2001002660

755	2001002661
756	2001002662
757	2001002663
758	2001002664
759	2001002665
760	2001002666
761	2001002871
762	2001003475
763	2001003476
764	2001003477
765	2001003478
766	2001003609
767	2001004858
768	2001006576
769	2001006601
770	2001007529
771	2001007573
772	2001007574
773	2001007575
774	2001007576
775	2001007577
776	2001007721
777	2001008984
778	2001009904
779	2001010768
780	2001011610
781	2001011611
782	2001014395
783	2001014929

784	2001015273
785	2001015613
786	2001015614
787	2001015879
788	2001016841
789	2001017919
790	2001017920
791	2001017921
792	2001018697
793	2001018792
794	2001019217
795	2001019218
796	2001019219
797	2001019220
798	2001019222
799	2001022655
800	2001022858
801	2001023845
802	2001023846
803	2001024904
804	2001024905
805	2001025746
806	2001026657
807	2001028400
808	2001028737
809	2001028738
810	2001029380
811	2001029381
812	2001029382

813	2001029659
814	2001029660
815	2001030389
816	2001030390
817	2001030391
818	2001030392
819	2001030394
820	2001030395
821	2001030396
822	2001030490
823	2001030491
824	2001031675
825	2001031999
826	2001032000
827	2001032001
828	2001032002
829	2001032006
830	2001032011
831	2001032012
832	2001032029
833	2001032030
834	2001032031
835	2001032032
836	2001032035
837	2001032040
838	2001032041
839	2001032042
840	2001032043
841	2001032044

842	2001032236
843	2001032237
844	2001032285
845	2001032286
846	2001032287
847	2001032343
848	2001032346
849	2001032349
850	2001032360
851	2001033508
852	2001033663
853	2001033668
854	2001033675
855	2001033676
856	2001033677
857	2001041188
858	2001050456
859	2001050467
860	2001053178
861	2001053180
862	2001053183
863	2001053184
864	2001053186
865	2001053189
866	2001053190
867	2001053191
868	2001053198
869	2001053199
870	2001054034

871	2001054038
872	2001054039
873	2001054044
874	2001070759
875	2001074992
876	2001074993
877	2001074994
878	2001074995
879	2001074996
880	2001074997
881	2001074998
882	2001074999
883	2001075000
884	2001075001
885	2001075002
886	2001075003
887	2001075004
888	2001075005
889	2001075006
890	2001075007
891	2001075008
892	2001075009
893	2001075830
894	2001075847
895	2001075849
896	2001075850
897	2001075851
898	2001075853
899	2001075855

900	2001075856
901	2001075857
902	2001075858
903	2001075859
904	2001075861
905	2001075866
906	2001075869
907	2001075871
908	2001087807
909	2001087808
910	2001087809
911	2001087810
912	2001087811
913	2001087812
914	2001087813
915	2001087814
916	2001087815
917	2001087816
918	2001087817
919	2001087818
920	2001087819
921	2001087820
922	2001087821
923	2001087822
924	2001087823
925	2001088658
926	2001088659
927	2001088977
928	2001088979

929	2002010434
930	2002010435
931	2002010436
932	2002010437
933	2002011084
934	2002011085
935	2002011086
936	2002011087
937	2002011088
938	2002011089
939	2002011090
940	2002011091
941	2002011092
942	2002011093
943	2002011094
944	2002011095
945	2002016522
946	2002016523
947	2002016524
948	2002016525
949	2002016526
950	2002016527
951	2002016528
952	2002016529
953	2002016530
954	2002016531
955	2002016532
956	2002016533
957	2002016534

958	2002016535
959	2002016536
960	2002016538
961	2002016539
962	2002016540
963	2002016541
964	2002016542
965	2002016543
966	2002016544
967	2002016545
968	2002016546
969	2002016547
970	2002016548
971	2002016549
972	2002016550
973	2002016551
974	2002016552
975	2002016553
976	2002016554
977	2002016555
978	2002016556
979	2002016557
980	2002016558
981	2002016559
982	2002016560
983	2002016591
984	2002017016
985	2002017017
986	2002017018

987	2002017019
988	2002017020
989	2002017021
990	2002017022
991	2002017023
992	2002017024
993	2002017025
994	2002017026
995	2002017027
996	2002017028
997	2002017029
998	2002017030
999	2002017031
1000	2002017032
1001	2002017033
1002	2002017034
1003	2002022477
1004	2002022478
1005	2002022479
1006	2002022480
1007	2002022481
1008	2002022482
1009	2002022483
1010	2002022484
1011	2002022485
1012	2002022486
1013	2002023358
1014	2002023804
1015	2002023805

1016	2002023806
1017	2002023807
1018	2002023808
1019	2002023809
1020	2002023810
1021	2002023811
1022	2002023812
1023	2002023813
1024	2002023814
1025	2002023815
1026	2002023816
1027	2002023817
1028	2002023818
1029	2002023819
1030	2002023820
1031	2002023821
1032	2002023822
1033	2002023823
1034	2002025027
1035	2002030764
1036	2002030765
1037	2002030766
1038	2002030767
1039	2002030768
1040	2002030769
1041	2002030770
1042	2002030771
1043	2002030772
1044	2002030773

1045	2002030774
1046	2002030775
1047	2002030776
1048	2002030777
1049	2002030778
1050	2002030779
1051	2002030780
1052	2002030781
1053	2002030782
1054	2002030783
1055	2002030784
1056	2002030785
1057	2002030786
1058	2002042431
1059	2002051884
1060	2002052104
1061	2002052105
1062	2002052106
1063	2002052107
1064	2002052108
1065	2002052109
1066	2002052110
1067	2002052111
1068	2002052112
1069	2002052113
1070	2002052114
1071	2002052115
1072	2002052116
1073	2002052117

1074	2002052118
1075	2002052119
1076	2002052120
1077	2002052121
1078	2002052122
1079	2002052123
1080	2002052124
1081	2002052125
1082	2002052126
1083	2002055758
1084	2002055762
1085	2002055768
1086	2002055771
1087	2002055775
1088	2002055776
1089	2002055777
1090	2002055779
1091	2002055780
1092	2002055782
1093	2002055783
1094	2002055785
1095	2002055788
1096	2002055798
1097	2002055799
1098	2002055801
1099	2002055803
1100	2002055805
1101	2002059437
1102	2002059438

1103	2002059439
1104	2002059440
1105	2002059441
1106	2002059442
1107	2002059443
1108	2002059444
1109	2002059445
1110	2002059446
1111	2002059447
1112	2002059448
1113	2002059449
1114	2002059450
1115	2002059451
1116	2002067145
1117	2002067146
1118	2002067147
1119	2002067148
1120	2002067149
1121	2002067150
1122	2002067151
1123	2002067153
1124	2002067154
1125	2002067155
1126	2002067156
1127	2002067157
1128	2002067158
1129	2002067159
1130	2002067160
1131	2002067161

1132	2002067162
1133	2002067163
1134	2002067164
1135	2002067165
1136	2002067166
1137	2002072012
1138	2002073497
1139	2002073929
1140	2002074281
1141	2002075514
1142	2002075515
1143	2002075516
1144	2002075517
1145	2002075518
1146	2002075519
1147	2002075520
1148	2002075521
1149	2002075522
1150	2002075523
1151	2002075524
1152	2002077039
1153	2002077040
1154	2002077041
1155	2002077042
1156	2002077043
1157	2002077044
1158	2002077045
1159	2002085213
1160	2002085214

1161	2002085215
1162	2002085216
1163	2002085217
1164	2002085218
1165	2002085219
1166	2002085220
1167	2002085221
1168	2002085222
1169	2002085223
1170	2002085224
1171	2002085225
1172	2002085226
1173	2002085227
1174	2002085228
1175	2002085229
1176	2002085230
1177	2002085231
1178	2002085232
1179	2002085233
1180	2002085234
1181	2002085235
1182	2002085236
1183	2002085237
1184	2002085238
1185	2002085239
1186	2002085240
1187	2002085241
1188	2002085242
1189	2002085243

1190	2002085244
1191	2002085245
1192	2002087474
1193	2002087481
1194	2002087486
1195	2002087488
1196	2002087491
1197	2002087492
1198	2002087493
1199	2002087494
1200	2002087495
1201	2002087498
1202	2002087499
1203	2002087504
1204	2002087505
1205	2003001719
1206	2003012883
1207	2003012884
1208	2003012885
1209	2003012886
1210	2003012887
1211	2003012888
1212	2003012889
1213	2003012890
1214	2003012891
1215	2003012892
1216	2003012893
1217	2003012894
1218	2003012895

1219	2003012896
1220	2003012897
1221	2003018544
1222	2003018545
1223	2003018546
1224	2003018547
1225	2003018548
1226	2003018549
1227	2003018550
1228	2003018551
1229	2003018552
1230	2003018553
1231	2003018554
1232	2003018555
1233	2003018556
1234	2003018557
1235	2003030067
1236	2003034421
1237	2003034422
1238	2003034423
1239	2003034424
1240	2003034425
1241	2003034426
1242	2003034427
1243	2003034428
1244	2003034429
1245	2003034430
1246	2003034431
1247	2003034432

1248	2003034433
1249	2003034434
1250	2003034435
1251	2003034436
1252	2003034437
1253	2003034438
1254	2003034439
1255	2003034440
1256	2003034441
1257	2003034442
1258	2003034797
1259	2003034798
1260	2003034799
1261	2003034800
1262	2003034801
1263	2003034802
1264	2003034803
1265	2003034804
1266	2003034805
1267	2003034806
1268	2003035277
1269	2003035278
1270	2003035279
1271	2003035280
1272	2003035282
1273	2003035283
1274	2003035285
1275	2003035286
1276	2003035287

1277	2003035294
1278	2003050916
1279	2003051149
1280	2003051150
1281	2003051151
1282	2003051152
1283	2003051153
1284	2003051154
1285	2003051155
1286	2003051156
1287	2003051157
1288	2003051158
1289	2003051159
1290	2003051160
1291	2003051161
1292	2003051162
1293	2003051163
1294	2003051164
1295	2003051165
1296	2003051166
1297	2003051167
1298	2003051168
1299	2003051456
1300	2003051457
1301	2003051462
1302	2003051466
1303	2003051470
1304	2003051471
1305	2003051472

1306	2003051475
1307	2003051476
1308	2003051480
1309	2003066875
1310	2003066878
1311	2003067731
1312	2003067732
1313	2003067733
1314	2003067735
1315	2003067736
1316	2003067737
1317	2003067738
1318	2003068390
1319	2004002973
1320	2004002977
1321	2004002978
1322	2004002979
1323	2004002980
1324	2004002981
1325	2004002982
1326	2004002983
1327	2004002984
1328	2004002986

UNITED STATES PATENT AND TRADEMARK OFFICE
(Attorney Docket No. 05-476-C)

PATENT

In re Application of:)
)
Choon Geun CHO) Examiner: TBA
)
International Application No.: PCT/KR2004/002466) Group Art Unit: TBA
U.S. Application No.: 10/567,529)
) Confirmation No. 9262
International Filing Date: September 24, 2004)
U.S. Filing Date: February 7, 2006)
)
For: Apparatus And Method For Tracking The)
Position/Object Using A Mobile)
Communication Network)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**DECLARATION IN SUPPORT OF PETITION UNDER 37 C.F.R. § 1.47(b) BY PERSON
HAVING PROPRIETARY INTEREST TO FILE APPLICATION ON BEHALF OF
INVENTOR WHOM WE HAVE BEEN UNABLE TO LOCATE**

Dear Sir:

This Declaration is in support of Petition under 37 C.F.R. § 1.47(b) to allow
UTStarcom, Inc. to make the application on behalf of inventor Choon Geun CHO, who
we have been unable to locate.

1. I, Jiwon LIM, am a paralegal at the law firm Kim & Chang.
2. I have first-hand knowledge of the facts recited herein.
3. This Declaration is in support of U.S. Patent Application entitled

"Apparatus And Method For Tracking The Position/Object Using A Mobile
Communication Network," filed in the U.S. Patent Office on August 16, 2005 and bearing
U.S. Application No. 10/560,142 and International Application No. PCT/KR2004/001856.

4. I am a paralegal at the law firm Kim & Chang, located at Hungkuk Life Insurance Building, 9F, 226 Sinmunno 1-ga, Jongno-gu, Seoul 110-786, Korea.

5. Kim & Chang represents UTStarcom Korea Limited, a subsidiary of UTStarcom, Inc.

6. I am a citizen of Korea, residing at 840-7 Mia-dong, Gangbuk-gu, Seoul 142-820, Republic of Korea.

7. On May 22, 2006, I sent a letter, via content-certified mail, including assignment documents and the Inventor's Declaration of Invention, to Mr. Choon Geun CHO's last known physical address (Siyeong Apt. 118-311, Garak-dong, Songpa-gu, Seoul 138-705, Republic of Korea). (See attached Exhibit 1).

8. On May 29, 2006, the content-certified package mailed to Mr. CHO was returned because Mr. CHO was not present at the indicated address. (See attached Exhibit 2).

9. On February 12, 2007, I sent a letter, including the entire U.S. Application as filed, to the inventor's last known address via registered mail. This letter was returned because Mr. CHO was not present at the indicated address. (See attached Exhibit 3).

10. I attempted to find Mr. CHO's phone number using Korea Information Services (KOIS). The Korea Information Service Corporation (KOIS) is essentially the Korean version of "411" and other directory assistance services. An English version of the website that describes the services that KOIS provides can be found at www.ekois.co.kr/new/eng/main/index.php. (See also attached Exhibit 4). KOIS is the largest and most comprehensive directory service in Korea. KOIS maintains a large database that is searchable for the contact information of listed people and companies. However, much like "411", written confirmation of results is not provided by KOIS, as it is a telephonic service. Korea Information Services confirmed that no

number was registered under Mr. CHO's name and his last known address. All efforts to obtain a current address, phone number, or email address, using KOIS have failed to provide new information concerning the whereabouts of Mr. CHO.

11. I also attempted to find the inventor's E-mail address using all well-known webmail services. Korean webmail services require a user's full name and residence ID when a user signs up for webmail service. The webmail services verify the entered name and residence ID using a server of one of the public certification authorities. Therefore, using Mr. CHO's full name and residence ID is the most effective way to search for his webmail address; performing a broader search using a partial name and omitting a residence ID number would not be effective. I was not successful in locating an e-mail address for Mr. CHO. (See attached Exhibit 5).

12. I also attempted to find Mr. CHO's telephone number using a web-based search engine (www.local.paran.com/tel/) using Mr. CHO's name and partial address. The searches performed were designed to be as broad as possible in order to locate the inventor. Because CHO is a very common surname in Korea, searching by Mr. CHO's surname would not provide sufficient specificity such that I could expect to locate the correct individual. These searches were also unsuccessful. (See attached Exhibit 6).

13. I visited the inventor's last known address at 3:50 pm on February 12, 2007, and met no one at the address. I met a woman who resides next door, and inquired of Mr. CHO. She did not know the current occupant of the address. (See attached Exhibit 7)

14. Finally, I visited the local Town Office (Garak 1-dong office) at 4:55pm on February 12, 2007 and met an officer, Ms. Hyunsook Jang, who confirmed that the current occupant of the inventor's last known address is a Mr. PARK, not Mr. CHO. However, she was unable to provide written confirmation of this information without an

official document authorizing that such a confirmation be issued with regard to the inventor.

15. I hereby declare that all statements made herein are of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made under penalty of perjury and that such willful false statements may jeopardize the validity of the specification or any patent issued thereon.

Respectfully submitted,

Date:

June 11, 2007

By:

Jiwon Lim

Jiwon LIM
Kim & Chang
Hungkuk Life Insurance Building, 9F,
226 Sinmunno 1-ga, Jongno-gu,
Seoul 110-786, Korea

DECLARATION IN SUPPORT OF PETITION UNDER 37 C.F.R. § 1.47(b) BY
PERSON HAVING PROPRIETARY INTEREST TO FILE APPLICATION ON BEHALF
OF INVENTOR

Dear Sir:

This Declaration is in support of Petition under 37 C.F.R.
§ 1.47(b) to allow UTStarcom, Inc. to make the application on
behalf of the non-signing inventor(s) listed in Schedule A,
column 3, whom we have been unable to locate.

1. I, Joo-Young Kim, am a citizen of Korea, residing at
Sangyong, Apt No. 103-1101, Sungsu-dong 1-ga 16/3, Sungdong-gu,
Seoul, Republic of Korea.

2. I am a Korean patent attorney with the law firm of Kim
& Chang, located at Hungkuk Life Insurance Building, 9F, 226
Sinmunno 1-ga, Jongno-gu, Seoul 110-786, Korea.

3. On behalf of Kim & Chang, I am representing UTStarcom
Korea Limited, a wholly owned subsidiary of UTStarcom, Inc.

4. I am knowledgeable regarding Korean Patent Law.

5. I submit this declaration in support of the
accompanying memorandum of law.

6. The Korean company Hyundai Syscomm filed the Korean
National Application listed in Schedule A, Column 6 as the
applicant of record, with inventor(s) in Schedule A, column 3
listed as the inventor(s).

7. The filing of the above-referenced Korean Application by Hyundai Syscomm was not opposed by the Examiner or any third party including the employee/inventor.

8. On April 27, 2004, UTStarcom, Inc., through its wholly owned subsidiary UTStarcom Korea Limited, acquired Hyundai Syscomm's Intellectual Property Portfolio, including the rights to the Korean National Application listed in Schedule A, column 6, and duly recorded this change of ownership with the Korean Intellectual Property Office without objection.

9. As a result of the acquisition, UTStarcom, Inc. became the sole proprietary owner of Hyundai Syscomm's Intellectual Property Portfolio, which includes the above-referenced Korean National Application.

10. UTStarcom Korea Limited filed the PCT application listed in Schedule A, column 8, claiming priority to the above-referenced Korean National Application.

11. The above-referenced PCT application entered U.S. National phase in the United States on the date listed in Schedule A, column 5, having the U.S. Application Serial Number listed in Schedule A, column 4.

12. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the

United States Code and that such willful false statements may
jeopardize the validity of the application or any patent issued
thereon.

Respectfully submitted,

Date: 16-January-2007 By: Joo-Young Kim
Joo-Young Kim
Kim & Chang
Hungkuk Life Insurance Building,
9F,
226 Sinmunno 1-ga, Jongno-gu,
Seoul 110-786, Korea

**MEMORANDUM OF LAW IN SUPPORT OF PETITION UNDER 37 C.F.R. §
1.47(b) BY PERSON HAVING PROPRIETARY INTEREST TO FILE APPLICATION
ON BEHALF OF INVENTOR**

This memorandum of law is in support of Petition under 37 C.F.R. § 1.47(b) to allow UTStarcom, Inc. ("UTStarcom") to make the application on behalf of a non-signing inventor.

BACKGROUND

UTStarcom submitted a Petition under 37 C.F.R. § 1.47(b) to allow UTStarcom to make the Application on behalf of the inventor listed in Schedule A, whom UTStarcom has been unable to locate. The Petition was denied on the grounds that UTStarcom allegedly failed to establish a proprietary interest in the above-referenced U.S. Application.

STATEMENT OF FACTS

All facts in support of the argument and conclusion are set forth in the Declaration of Joo-Young Kim under M.P.E.P. 409.03(f).

ARGUMENT AND CONCLUSION

UTStarcom should be awarded title to the above-referenced U.S. Application because UTStarcom, as the assignee of patent rights to the underlying Korean Application and subsequent patent applications granted by the assignor Hyundai Syscomm Inc. ("Hyundai Syscomm"), is the sole proprietary owner of the U.S. Application.

Under Korean Patent Law, UTStarcom is recognized as the owner of the Korean Application. First, the Korean Intellectual Property Office recognizes UTStarcom as the current owner of the Korean Application as a matter of record. Second, the invention disclosure form executed by the inventor in favor of Hyundai Syscomm, which includes an assignment of the subject matter of the Korean Application from the inventor to Hyundai Syscomm, is more than sufficient to overcome any challenge to UTStarcom's ownership interest.

The Korean Patent Act provides that a patent application of an employee may be filed directly by the employee's company, without an explicit assignment from the employee to the employee's company. Korean Patent Act, Article 42. Unless the examiner or a third party contests the company's right to file the application, the company becomes the owner of the application for all intents and purposes. Thus, even in the absence of an employee-inventor assignment, a Korean Patent Application filed by a company without contest by others is the proprietary owner of the patent rights. See Korean Patent Act, Article 42, Para 1.

In the instant case, Hyundai Syscomm filed the Korean National Application, listed in Schedule A, as the named applicant. The filing of the application was not contested by the Examiner or any third party. Thus, under Korean Law, Hyundai Syscomm became the owner of the Korean application even in the absence of an employee inventor assignment. Subsequently, the Hyundai Syscomm's patent portfolio, including the above-mentioned Korean Application, was assigned to UTStarcom. This assignment was recorded with the Korean Intellectual Property Office, without objection, making UTStarcom the legal owner of the above-mentioned Korean Application.

Under the present circumstances, only the inventor(s) may challenge the legitimacy of Hyundai Syscomm's ownership of the

Korean Application. Korean Patent Act, Articles 34 and 35. However, any challenge by the inventor(s) would fail under Korean Patent Law. The inventor(s) executed an invention disclosure form, which assigns the subject matter of the Korean Application to Hyundai Syscomm. Because the subject matter described in the invention disclosure form is virtually identical to the subject matter contained in the Korean Application, the assignment therein would be deemed by a Korean court of law to assign the Korean Application to Hyundai Syscomm. See In-Chul Choi v. Samsung Electronics Co., Ltd., 2001 Gahap 13977 (Seoul District Court, August 22, 2002) (recognizing the validity of the assignment based on the content in the invention disclosure form despite the absence of a specific application number reference). Thus, even if challenged, the chain of title of the Korean Application would be sustained under Korean Patent Law and UTStarcom would remain the ultimate owner.

This ownership of the Korean Application, in conjunction with the other assignment terms of the acquisition agreement previously submitted, establishes UTStarcom's rights to the subsequent PCT application and U.S. national phase application. Thus, UTStarcom has a proprietary interest in the referenced U.S. Application (listed in Schedule A), and should be allowed to make the application in U.S. on behalf of the missing inventor under 37 C.F.R. § 1.47(b).

Respectfully submitted

Date:

June 11, 2007

By:



Joo-Young Kim
Kim & Chang
Hungkuk Life Insurance Building, 9F,
226 Sinmunno 1-ga, Jongno-gu,
Seoul 110-786, Korea

Exhibit 1

[KOREAN PATENT ACT]

제 34 조 (무권리자의 특허출원과 정당한 권리자의 보호)

발명자가 아닌 자로서 특허를 받을 수 있는 권리의 승계인이 아닌 자(이하 "무권리자"라 한다)가 한 특허출원이 제 33 조제 1 항 본문의 규정에 의한 특허를 받을 수 있는 권리를 가지지 아니한 사유로 제 62 조 제 2 호에 해당되어 특허를 받지 못하게 된 경우에는 그 무권리자의 특허출원후에 한 정당한 권리자의 특허출원은 무권리자가 특허출원한 때에 특허출원한 것으로 본다. 다만, 무권리자가 특허를 받지 못하게 된 날부터 30 일을 경과한 후에 출원을 한 경우에는 그러하지 아니하다.

제 35 조 (무권리자의 특허와 정당한 권리자의 보호)
제 33 조제 1 항 본문의 규정에 의한 특허를 받을 수 있는 권리를 가지지 아니한 사유로 제 69 조 제 1 항 제 2 호에 해당되어 특허취소결정이 확정된 경우 또는 제 33 조 제 1 항 본문의 규정에 의한 특허를 받을 수 있는 권리를 가지지 아니한 사유로 제 133 조 제 1 항 제 2 호에 해당되어 특허를 무효로 한다는 심결이 확정된 경우에는 그 특허출원후에 한 정당한 권리자의 특허출원은 취소 또는 무효로 된 그 특허의 출원시에 특허출원한 것으로 본다. 다만, 그 특허의 등록공고가 있는 날부터 2 년을 경과한 후에 특허출원을 하거나 취소결정 또는 심결이 확정된 날부터 30 일을 경과한 후에 특허출원을 한 경우에는 그러하지 아니하다.

[TRANSLATION]

Article 34 (Patent Application Filed by an Unentitled Person and Protection of the Lawful Holder of a Right)

Where a patent cannot be granted because an application was filed by a person who is not the inventor or a successor to the right to obtain a patent (referred to as "an unentitled person") under Article 33(1) as prescribed in Article 62(ii), a subsequent application filed by the lawful holder of the right is deemed to have been filed on the filing date of the earlier application filed by the unentitled person. This provision does not apply, however, if the subsequent application is filed by the lawful holder of the right more than thirty days after the date on which the application filed by the unentitled person was rejected.

Article 35 (Patent Granted to an Unentitled Person and Protection of the Lawful Holder of a Right)

Where a decision to revoke a patent becomes final for lack of entitlement to obtain a patent under Article 33(1) as prescribed in Article 69(1)(ii) or a decision to invalidate becomes final due to a lack of entitlement under Article 33(1) as prescribed in Article 133(1)(ii), a subsequent application filed by the lawful holder of the right is deemed to have been filed on the filing date of the revoked or invalidated application. However, this provision does not apply if the subsequent application is filed more than two years after the publication date of the first application or more than thirty days after the decision to revoke or invalidate becomes final.

[KOREAN PATENT ACT]

제 42 조 (특허출원)

① 특허를 받고자 하는 자는 다음 각호의 사항을 기재한 특허출원서를 특허청장에게 제출하여야 한다.

1. 특허출원인의 성명 및 주소(법인인 경우에는 그 명칭 및 영업소의 소재지)
2. 특허출원인의 대리인이 있는 경우에는 그 대리인의 성명 및 주소나 영업소의 소재지(대리인이 특허법인인 경우에는 그 명칭, 사무소의 소재지 및 지정된 변리사의 성명)
3. 삭제
4. 발명의 명칭
5. 발명자의 성명 및 주소
6. 삭제

[TRANSLATION]

Article 42 (Patent Application)

(1) A person seeking to register a patent shall file a patent application with the Commissioner of the Korean Intellectual Property Office, stating the following:

- (i) the name and address of the applicant (and, if a legal entity, the name and address of the business);
- (ii) the name and residential or business address of the agent, if any (and, if the agent is a patent legal entity, the name and address of the business and the name of the designated patent attorney);
- (iii) deleted;
- (iv) the title of the invention;
- (v) the name and address of the inventor;
- (vi) deleted.

Exhibit 2

Seoul Southern District Court

Judgment

Case No. 2001 Gahap 13977
Plaintiff: In Chul Choi
Defendant: Samsung Electronics Ltd.
Pronouncement: August 22, 2002

ORDER

The confirmation claim of the present action is dismissed.

Tenor of Complaint

Plaintiff hereby seeks confirmation that the patented inventions, described in the patent right list of the accompanying sheet, do not belong to an in-service invention.

GROUND

1. Findings of Facts

A. The Defendant's company, taking fabrication, sale, etc. of communication mechanisms and related devices as its objective under its constitution, has manufactured mobile-phone terminals since May of 1989. The Plaintiff entered the Defendant's company on January 10, 1989, and had served as a member of a team known as the "Time Machine Team (TMT)" between July 13, 1992 and February 16, 1995.

B. TMT of the Defendant's company is a department that was organized by selecting incumbent staff to create ideas for new product development. TMT holds a weekly evaluation meeting, where team members exchange ideas equipped with marketability and practicability, and hold quarterly meetings that report the results to the board of directors, assigning no specific tasks to its team members. The Plaintiff was mainly focused on conceiving and commercializing a new Hangul inputting method, submitting a report titled "Value of Text in the Multimedia World" showing the needs and practicability

of a new Hangul inputting method on May 20, 1994, and a report titled "First report regarding commercialization drive of a new Hangul inputting method" on July 18, 1994, together with his teammate, Dong Ki Rui.

C. During his tenure on TMT, the Plaintiff invented "Method and Apparatus for Generating Text Inputting Codes (hereinafter, referred to as the 'first invention')," described in patent right list 1 of the accompanying sheet, and transferred the right to obtain a patent for the Defendant's company while providing an in-service invention report on the first invention on February 19, 1993. The Defendant's company filed a patent application for the first invention in its name on July 6, 1993, and completed the patent registration on March 13, 1996.

D. Furthermore, the Plaintiff, together with his teammate, Dong Ki Rui, invented "Method and Apparatus for Generating Text Inputting Codes (hereinafter, referred to as the 'second invention')" described in patent right list 2, and transferred the right to obtain a patent for the Defendant's company while providing an in-service invention report on the second invention on October 13, 1994. The Defendant's company filed a patent application for the second invention in its name on May 11, 1995, and completed the patent registration on August 10, 1998.

E. The Defendant's company has manufactured and sold mobile-phone terminals using the text inputting methods of the inventions since November of 1998.

2. The Plaintiff's Claims and Holding thereon

A. Gist of the Plaintiff's Claims

The Plaintiff seeks: (a) confirmation that the first and second inventions are not an in-service invention, arguing that the inventions were misconceived as an in-service invention and filed in the name of the Defendant's company although they actually belong to a liberal invention; and (b) the Defendant's return of 1 billion KrW as part of an unjust enrichment, arguing that since the contracts of transfer were based on a misconception for

the inventions to be an in-service invention are invalid, the Defendant is not a legitimate patentee and has an obligation to return, to the Plaintiff, the profits earned by practicing the inventions as an unjust enrichment.

B. Relevancy of the Confirmation Claim

The Defendant made a defense prior to a main hearing that the Plaintiff's confirmation claim lacks eligibility and thus is irrelevant because it seeks confirmation of a factual matter. The Plaintiff seeks the confirmation for the first and second inventions to not be an in-service invention as a basis for the unjust enrichment return claim being sought by the present action. This is to confirm part of a legal requirement fact, and thus is irrelevant. Furthermore, the confirmation stake of a confirmation action can be recognized if the obtainment of a confirmation judgment is the most effective and appropriate means for eliminating the challenge and risk when the plaintiff's legal status is challenged and risked. However, as will be seen in item C. (1), even though the first and second inventions were not an in-service invention, this would not affect the patent right registered in the name of the Defendant's company, unless the invalidation decision is rendered and becomes final and conclusive in a patent registration invalidation trial. Therefore, because seeking the confirmation for the inventions to not be an in-service invention cannot be seen as an effective and appropriate means, the Plaintiff's confirmation claim of the present action is irrelevant.

C. Unjust Enrichment Return Claim

(1) The Plaintiff argues first, that since the first and second inventions are not an in-service invention but a liberal one, each contract for transferring each right to obtain a patent to the Defendant is invalid per se for primitive impossibility of the objective of a legal activity or under Article 39, Paragraph 1 of the Patent Act, or invalid for violating Article 103 of the Civil Code.

In regard to this, if the first and second inventions belong to a liberal invention, Article 39, Paragraph 1 of the Patent Act stipulates that an invention constitutes an in-service invention if the invention was made by an employee, etc. in connection with his/her service and falls by nature within the business

range of the employer, etc., and the activity resulting into the invention was part of the present or past duties of the employee, etc.

As previously seen, the Defendant's company takes the fabrication and sale of communication mechanisms as one of its founding objectives, and has set the mobile-phone terminal as one of the primary manufactured items from the year of 1989 through to the present time. Since the inventions are directed to a text inputting method usable for mobile-phone terminals, these are regarded to fall within the business range of the Defendant's company. Furthermore, the Plaintiff's then duty was to create ideas for new products development in the field of the information and telecommunication at the time of conceiving each invention, and the Plaintiff reached the first and second inventions substantially as a result of focusing mainly on collecting ideas for a Hangul inputting method. As such, each invention is determined to fall within the Plaintiff's duty.

Therefore, since the first and second inventions should belong to an in-service invention, the Plaintiff's arguments contend the validity of each transfer contact on premise of the opposite.

(2) The Plaintiff also argues that since the patent application for the second invention was filed four months after the Defendant's company succeeded to the right to the invention from the Plaintiff, the second invention should be regarded as a liberal invention under Article 11, Paragraph 1 of the Invention Promotion Act, and the Defendant should return unjust enrichment, amounting to the royalty of a non-exclusive license, for failing to obtain consent to a non-exclusive license from the inventor Plaintiff under Article 2 of the same.

Article 11 of the Invention Promotion Act views an invention as a liberal invention in case an employer, etc. fails to file a patent application within a period designated under the Presidential Order (Article 5 of the same designates the period for four months) after succeeding the right to an in-service invention or waive filing of the application in writing (Paragraph 1), and stipulates that the employer, etc. cannot own a non-exclusive license to the in-service invention being regarded as a liberal one without the consent of the employee, etc in spite of Article 39, Paragraph 1 of the Patent Act (Paragraph

2). The fact that the Defendant's company filed the application for the second invention on May 11, 1995, four months passing from October 13, 1994 when the Defendant's company succeeded to the right to the second invention from the Plaintiff, is as previously seen.

However, even if the Defendant's company had completed the patent registration in its name, although the transfer contract of the second invention was invalidated under the above provision and the Defendant's company did not have a right to obtain a patent, the Plaintiff could not assert invalidity of the patent right having been registered in the name of the Defendant's company until the patent invalidation decision goes final and conclusive. Of course, the Plaintiff could request a patent invalidation trial based on the above grounds, which however, is not feasible here. Therefore, the Defendant has a right to legally practice the invention, and needs not obtain consent of the Plaintiff for practicing the invention because the Plaintiff did not register the patent in his/her own name. As such, the Plaintiff's above arguments are groundless and unreasonable.

서 울 지 방 법 원

남 부 지 원

판 결

사	건	2001가합13977호
원	고	최인철
피	고	삼성전자주식회사
판	결	선 고
		2002. 8. 22.

주 문

이 사건 소 중 확인청구 부분을 각하한다.

청 구 취 지

원고와 피고 사이에서 별지 특허권목록 기재 1, 2의 특허발명은 직무발명이 아님을 확인한다.

이 유

1. 기초사실

가. 피고회사는 통신기계기구 및 관련기구와 그 부품의 제작, 판매 등을 그 정관상의 목적으로 하고, 1989. 5.경부터 이동전화단말기를 생산해 온 회사이고, 원고는 1989. 1. 10. 피고회사에 입사하여 1992. 7. 13.부터 1995. 2. 16.까지 사이에 피고회사의 '타임머션팀'에 소속되어 근무하였다.

나. 피고회사의 '타임머션팀'은 신상품개발을 위한 아이디어 창출을 위하여 사내공모를 통해 직원을 선발, 조직한 부서로 그 팀원들은 구체적인 특정 업무를 맡지 아니한 채 매주 팀원들간에 시장성과 실현성 있는 아이디어를 제출하는 평가회를 가지고, 분기별로 경영진을 대상으로 그 결과물을 발표하는 정기 보고회를 개최하였는데, 원고는 같은 팀원인 류동기와 함께 1994. 5. 20. 새로운 한글입력방식의 필요성과 실용화 방안에 관한 '멀티미디어 세계에서 문자의 가치'라는 보고서를, 1994. 7. 18. '새로운 한글입력방법 사업화추진 1차 보고서'를 각 제출하는 등 주로 새로운 한글입력방식의 고안 및 사업화에 주력하였다.

다. 원고는 위 타임머션팀에 근무하던 중, 별지 특허권목록 1. 기재의 '문자입력코드 발생방법 및 장치'(이하 '제1발명'이라 한다)를 발명하고, 1993. 2. 19. 피고회사에 제1발명에 관한 직무발명신고를 하면서 특허받을 권리를 양도하였으며, 피고회사는 1993. 7. 6. 피고회사 명의로 제1발명에 관한 특허를 출원하여 1996. 3. 13. 특허등록을 마쳤다.

라. 또한 원고는 위 류동기와 함께 위 목록 2. 기재의 '문자입력코드 발생장치 및 방법'(이하 '제2발명'이라 한다)을 발명하고, 1994. 10. 13. 피고회사에 제2발명에 관한 직무발명신고를 하면서 특허받을 권리를 양도하였으며, 피고회사는 1995. 5. 11. 피고회사 명의로 제2발명에 관한 특허를 출원하여 1998. 8. 10. 특허등록을 마쳤다.

마. 피고회사는 1998. 11.경부터 위 발명들의 문자입력방식을 이용한 이동전화단말기를 생산, 판매해 오고 있다.

2. 원고의 청구 및 이에 대한 판단

가. 원고의 청구내용

원고는 ① 위 각 발명은 원고 개인의 자유발명에 해당됨에도 직무발명으로 오인되어 피고 명의로 특허등록이 된 것이라고 주장하면서 제1, 2발명이 직무발명이 아니라는 확인을 구하고, ② 위 발명들을 직무발명으로 오인하고 체결한 각 양도계약이 무효인 이상 정당한 특허권자가 아닌 피고는 위 발명들을 실시하여 얻은 수익을 부당이득으로서 원고에게 반환할 의무가 있다고 주장하면서, 그 일부로서 10억원을 지급할 것을 구한다.

나. 확인청구 부분의 적법성

피고는, 원고의 위 확인청구는 사실관계의 확인을 구하는 것으로 확인의 소의 대상적격이 없어 부적법하다고 본 안전 항변을 하므로 살피건대, 원고의 위 확인청구는 원고가 이 사건 소로써 구하고 있는 부당이득반환청구의 전제로 제1, 2발명이 직무발명이 아니라는 확인을 구하는 취지인바, 이는 법률요건사실 일부의 확인을 구하는 것이어서 부적법하고, 또한 확인의 소에 있어서 확인의 이익은 원고의 법적 지위가 불안, 위험할 때 그 불안, 위험을 제거하는데 있어 확인판결을 받는 것이 가장 유효·적절한 수단인 경우에 인정된다 할 것인데, 아래 다.의 (2)항에서 보는 바와 같이 가사 제1, 2발명이 직무발명이 아니라 하더라도 특허무효심판절차에서 무효심결이 확정되지 아니하는 이상에는 피고회사 명의로 등록된 특허권에 어떠한 효력이 미친다고 볼 수도 없으므로, 위 발명들이 직무발명이 아니라는 확인을 구하는 것은 원고에게 현존하는 법적 불안, 위험을 해소할 수 있는 유효·적절한 수단이라 할 수 없으니, 결국 원고의 이 사건 소 중 확인청구 부분은 부적법하다.

다. 부당이득반환청구 부분

(1) 원고는 먼저, 제1, 2발명은 직무발명이 아닌 자유발명이므로 그 특허받을 권리를 피고에게 양도한 위 각 양도계약은 법률행위 목적의 원시적 불능 또는 특허법 제39조 제3항에 의하여 당연 무효이거나 민법 제103조에 위반되어 무효라고 주장한다.

그러므로 과연 제1, 2발명이 자유발명인지에 관하여 보건대, 특허법 제39조 제1항은 직무발명의 개념에 관하여 종업원 등이 그 직무에 관하여 발명한 것이 성질상 사용자 등의 업무범위에 속하고, 그 발명을 하게 된 행위가 종업원 등의 현재 또는 과거의 직무에 속하는 경우 그 발명은 직무발명이라고 규정하고 있다.

앞에서 본 바와 같이 피고회사는 통신기계기구의 제작, 판매를 그 설립목적의 하나로 규정하고 있고, 1989년부터 현재까지 이동전화단말기를 주요 생산품목으로 하고 있으며, 위 발명들은 이동전화단말기에 이용될 수 있는 문자입력방식에 관한 발명 이므로 피고회사의 업무범위에 속한다 할 것이다. 또한 위 각 발명 당시 원고의 직무는 정보통신부분의 신상품 개발을 위한 아이디어를 창출하는 것으로 실제 한글입력방식에 관한 아이디어 개발에 주력한 결과 제1, 2발명에 이르게 되었으므로 위 각 발명 행위는 원고의 직무에 속한다 할 것이다.

따라서 제1, 2발명은 직무발명에 해당한다고 보아야 할 것이므로, 위 발명들이 직무발명이 아님을 전제로 각 양도계약의 효력을 다투는 원고의 주장은 더 나아가 살필 것 없이 이유 없다.

(2) 원고는 또한, 제2발명에서는 피고회사가 원고로부터 발명에 관한 권리를 승계한 때로부터 4개월이 지나서 특허를 출원하였으므로 이는 발명진흥법 제11조 제1항에 의하여 자유발명으로 간주되고, 같은 조 제2항에 따라 발명자인 원고로부터 통상실시에 대한 동의를 받지 아니한 이상 피고는 원고에게 통상실시료 상당의 부당이득을 반환하여야 한다고 주장한다.

살피건대, 발명진흥법 제11조는 사용자 등이 직무발명에 관한 권리를 승계한 후 대통령령이 정하는 기간(같은 법 시행령 제5조는 그 기간을 4개월로 정하고 있다) 내에 출원을 하지 아니하는 경우 또는 서면으로 그 출원을 포기한 경우 당해 발명은 자유발명으로 보고(제1항), 자유발명으로 보는 직무발명에 대하여는 특허법 제39조 제1항의 규정에도 불구하고 당해 발명을 한 종업원 등의 동의를 받지 아니하고는 통상실

시권을 가질 수 없다(제2항)고 규정하고 있고, 피고회사가 원고로부터 제2발명에 관한 권리를 승계한 1994. 10. 13.로부터 4개월이 경과한 1995. 5. 11.에야 위 발명에 관한 특허를 출원한 사실은 앞에서 본 바와 같다.

그러나 가사 위 법률규정에 의하여 제2발명에 관한 양도계약이 무효가 되어 피고회사가 특허를 받을 권리를 가지지 아니함에도 불구하고 그 명의로 특허등록을 마쳤다 하더라도 원고가 그와 같은 사유를 들어 특허무효심판을 청구함은 별론으로 하고 특허무효심결이 확정되기 전에는 피고 명의로 등록된 특허권의 무효를 주장할 수는 없는 것이므로 피고는 특허권자로서 적법하게 그 발명을 실시할 권리가 있고, 또한 원고가 자기 명의로 특허등록을 받지 아니한 이상 피고회사가 위 발명을 실시함에 있어 원고의 동의를 얻어야 한다고 볼 수도 없으므로, 원고의 위 주장은 이유 없다.

SCHEDULE A

1	2	3	4	5	6	7	8	9
MBHB Reference No.	Title	Inventor(s)	U.S. Application No.	U.S. Filing Date	Korean Application No.	Filing Date (Korean Application)	PCT Application No.	Filing Date PCT National Phase
1 05-386-B	Method For Stabilizing BTS Using E1 Trunk Board Duplexing Of BSC	Se Yeon KIM	10/545,922	August 17, 2005	2003-0018549	March 25, 2003	PCT/KR2004/00645	March 24, 2004
2 05-390-B	Method For Optimizing A DSP Input Clock Using A Comparing/Analyzing Circuit	Seong Chul SHIN	10/545,505	August 12, 2005	2003-0018553	March 25, 2003	PCT/KR2004/00655	March 24, 2004
3 05-392-B	Method For Trunk Line Duplexing Protection Using A Hardware Watchdog	Yeong Weon JUNG	10/545,895	August 17, 2005	2003-0018554	March 25, 2003	PCT/KR2004/00654	March 24, 2004
4 05-428-B	Device for Implementing a RNC Using LVDS	Kyung Hwan AN	10/559,738	December 6, 2005	2003-0051165	July 24, 2003	PCT/KR2004/01858	July 23, 2004
5 05-428-C	Device for Implementing a RNC Using LVDS	Kyung Hwan AN	11/534,965	September 25, 2006	2003-0051165	July 24, 2003	PCT/KR2004/01858	July 23, 2004
6 05-429-B	Method of Allocating Links in a IX EVDO System	Kye Chol CHO	10/560,297	December 12, 2005	2003-0051466	July 25, 2003	PCT/KR2004/01880	July 26, 2004
7 05-432-B	Method for Downloading a Single Firmware Image File to Client Systems Having Different CPU Modules	Chan Soo PARK	10/559,225	December 6, 2005	2003-0051153	July 24, 2003	PCT/KR2004/01853	July 23, 2004
8 05-432-C	Method for Downloading a Single Firmware Image File to Client Systems Having Different CPU Modules	Chan Soo PARK	11/534,970	September 25, 2006	2003-0051153	July 24, 2003	PCT/KR2004/01853	July 23, 2004

SCHEDULE A

MBHB Reference No.	Title	Inventor(s)	U.S. Application No.	U.S. Filing Date	Korean Application No.	Filing Date (Korean Application)	PCT Application No.	Filing Date PCT National Phase
9 05-433-B	Method for Unifying Operations of Boards by Using Logical Addresses Thereof	Yoon Mi HWANG	10/559,235	December 6, 2005	2003-0051155	July 24, 2003	PCT/KR2004/01855	July 23, 2004
10 05-433-C	Method for Unifying Operations of Boards by Using Logical Addresses Thereof	Yoon Mi HWANG	11/534,960	September 25, 2006	2003-0051155	July 24, 2003	PCT/KR2004/01855	July 23, 2004
11 05-434-B	Method for Establishing an ATM Traffic Channel Path Between a BSC and a BTS in an EV-DO System	Woo Seog KOO	10/560,142	December 9, 2005	2003-0051157	July 24, 2003	PCT/KR2004/001856	July 23, 2004
12 05-438-B	ATM Switch for use in W-CDMA	Cheol Hyun JANG	10/545,578	August 16, 2005	2003-0018557	March 25, 2003	PCT/KR2004/00658	March 25, 2004
13 05-439-B	Remote Unit for Adding Frequency Assignments to a Separation-Type Base Transceiver Station	Jae Ick LEE	10/556,267	November 14, 2005	2003-0034799	May 30, 2003	PCT/KR2004/01276	May 28, 2004
14 05-476-C	Apparatus and Method for Tracking the Position/Object Using a Mobile Communication Network	Choon Geun CHO	10/567,529	February 7, 2006	2003-0066875	September 26, 2003	PCT/KR2004/02466	September 24, 2004
15 05-496-C	Method of Controlling Power in a CDMA- 2000 System	Tae Ik SONG	10/568,234	February 14, 2006	2003-0067736	September 30, 2003	PCT/KR2004/02469	September 24, 2004
16 05-497-C	Method of Controlling Power in a W-CDMA Mobile Communication System	Dong Keun KIM	10/569,046	February 22, 2006	2003-0067737	September 30, 2003	PCT/KR2004/02470	September 24, 2004

SCHEDULE A

MBHB Reference No.	Title	Inventor(s)	U.S. Application No.	U.S. Filing Date	Korean Application No.	Filing Date (Korean Application)	PCT Application No.	Filing Date PCT National Phase
17 05-498-C	Method of Controlling Data Rate for a Forward Data Service in a CDMA 2000-1X System	Jung Han LEE	10/569,041	February 22, 2006	2003-0067738	September 30, 2003	PCT/KR2004/02471	September 24, 2004
18 05-500-B	ATM Switched Router for Transmitting IP Packet Data	Jung Hee PARK	10/585,586	July 11, 2006	2004-0002981	January 15, 2004	PCT/KR2005/00133	January 14, 2005
19 05-507-B	Apparatus and Method for Dualizing an Asynchronous Transfer Mode (ATM) Router in a CDMA2000 System	Tae Hong KIM	10/585,602	July 11, 2006	2004-0002973	January 15, 2004	PCT/KR2005/00134	January 14, 2005
20 05-509-B	Method for Correcting Time Data in a Network Management Application Using a SNMP	Sang Dae PARK	10/586,086	July 13, 2006	2004-0002979	January 15, 2004	PCT/KR2005/00138	January 14, 2005
21 05-511-B	Apparatus and Method for Sensing Faults of Application Programs in a CDMA System	Ki Sung LYU	10/586,289	July 13, 2006	2004-0002980	January 15, 2004	PCT/KR2005/00139	January 14, 2005
22 05-517-B	Automatic Update System and Method for Using a META MIB	Young Jin KIM	10/586,087	July 13, 2006	2004-0002982	January 15, 2004	PCT/KR2005/00140	January 14, 2005

SCHEDULE A

MBHB Reference No.	Title	Inventor(s)	U.S. Application No.	U.S. Filing Date	Korean Application No.	Filing Date (Korean Application)	PCT Application No.	Filing Date PCT National Phase
23 05-518-B	Structure of a Management Information Base Communicated Between a Network Management System and an Agent of a Network Element	Kwang Seok KANG	10/585,838	July 12, 2006	2004-0002983	January 15, 2004	PCT/KR2005/00141	January 14, 2005
24 05-595-B	Method of Distributing Network Traffic in a Mobile Communication System	Hyun Young SHIN	10/556,924	November 14, 2005	2003-0035283	June 2, 2003	PCT/KR2004/01310	June 2, 2004
25 05-597-B	System and Method for Tracking Position of a Mobile Unit Using Beacons in a Mobile Communications System	June Man KIM	10/560,664	December 13, 2005	2003-0050916	July 24, 2003	PCT/KR2004/01851	July 23, 2004
26 05-615-B	Method for Call Completion Service	Sea Gon CHUN	10/556,274	November 14, 2005	2003-0034806	May 30, 2003	PCT/KR2004/01274	May 28, 2004
27 05-616-B	Method for Automatically Setting a Frequency of a Base Station in a CDMA- 2000 System	Ju Hyun BAN; Sang Won SON	10/561,351	December 19, 2005	2003-0051154	July 24, 2003	PCT/KR2004/01854	July 23, 2004